SITE DEVELOPMENT PLANS

OF

HARDEEVILLE HAULING FACILITY

8029 SPEEDWAY BOULEVARD

HARDEEVILLE, SOUTH CAROLINA

PREPARED FOR:

WASTE MANAGEMENT OF SOUTH CAROLINA, INC.

1850 PARKWAY PLACE
SUITE 600
MARIETTA, GA 30067

TM# 031-00-00-016

OCTOBER 31, 2017

J-26810.0001

PREPARED BY:

THOMAS & HUTTON

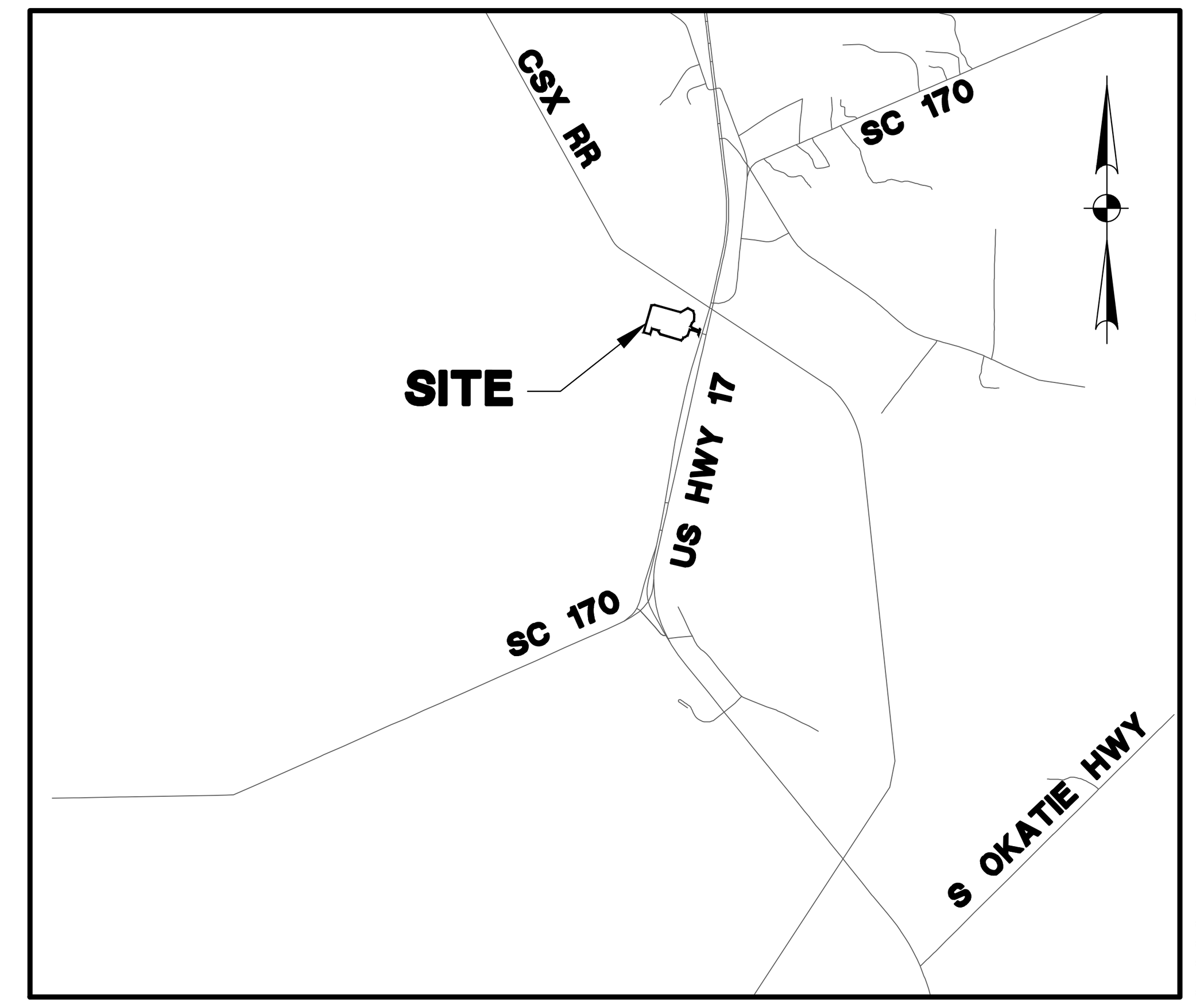
REVISION HISTORY

REV. NO.	REVISION	BY	DATE

SUBMITTAL HISTORY

SUBMITTED TO	DATE

Hardeeville Hauling Facility
BJWSA NO: 2018-029



VICINITY MAP
SCALE: 1" = 5000'

HARDEEVILLE HAULING FACILITY
8029 SPEEDWAY BOULEVARD

J-26810.0001
10/31/17

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811 Know what's below. Call before you dig.

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50 Park of Commerce Way
Savannah, GA 31405
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SEWER LEGEND

DESCRIPTION	EXISTING	PROPOSED
GRAVITY PIPE	SS	
SINGLE SERVICE LATERAL		
DOUBLE SERVICE LATERAL		
MANHOLE		
CLEANOUT		
FORCEMAIN	10"FM	10"FM
VALVE AND BOX		
FLUSH HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
22-½° BEND - HORIZONTAL		
11-¼° BEND - HORIZONTAL		
BEND - VERTICAL		
PLUG		

WATER LEGEND

DESCRIPTION	EXISTING	PROPOSED
WATER MAIN	10"W	10"W
SINGLE SERVICE LATERAL		
DOUBLE SERVICE LATERAL		
VALVE AND BOX		
FIRE HYDRANT W/VALVE & BOX		
POST HYDRANT		
REDUCER		
BACKFLOW PREVENTOR		
CROSS		
TEE		
90° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
22-½° BEND - HORIZONTAL		
11-¼° BEND - HORIZONTAL		
BEND - VERTICAL		
CAP		

ABBREVIATIONS

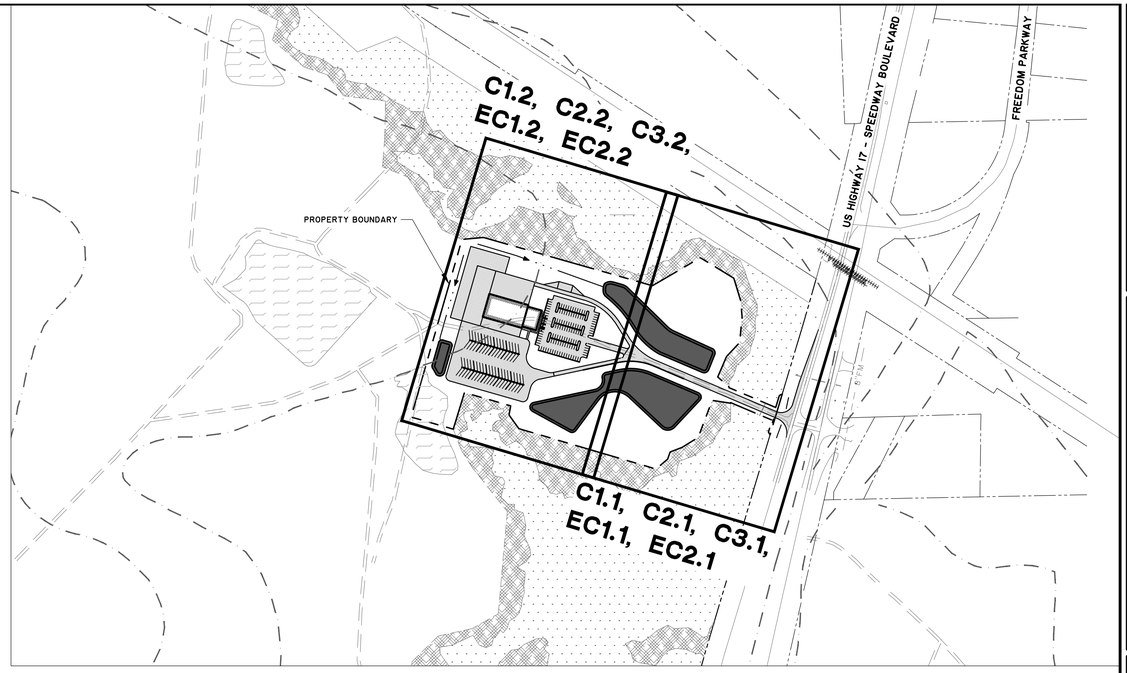
HDPE	HIGH DENSITY POLYETHELENE	LF	LINEAR FEET	SF	SQUARE FEET
BOT	BOTTOM	MAX	MAXIMUM	SS	SANITARY SEWER
CI	CURB INLET	MIN	MINIMUM	TC	TOP OF CURB
CPP	CORRUGATED PLASTIC PIPE	MH	MANHOLE	TG	TOP OF GUTTER
DIP	DUCTILE IRON PIPE	OC	ON CENTER	TP	TOP OF PAVEMENT
EL	ELEVATION	PC	POINT OF CURVE	TW	TOP OF WALK
FG	FINISH GRADE	PH	POST HYDRANT	TYP	TYPICAL
FH	FIRE HYDRANT	PT	POINT OF TANGENT	W	WATER
FM	FORCE MAIN (SANITARY SEWER)	PVC	POLYVINYL CHLORIDE	W/	WITH
FR	FRAME	RCP	REINFORCED CONCRETE PIPE	WV	WATER VALVE
GI	GRATE INLET	RJP	RESTRAINED JOINT PIPE	YI	YARD INLET
GV	GATE VALVE	R/W	RIGHT-OF-WAY		
INV	INVERT ELEVATION	SD	STORM DRAINAGE		
JB	JUNCTION BOX	SDMH	STORM DRAINAGE MANHOLE		

DRAINAGE LEGEND

DESCRIPTION	EXISTING	PROPOSED
PIPE		
DITCH		
CURB INLET		
GRATE INLET		
JUNCTION BOX		
OUTLET STRUCTURE		

OTHER UTILITIES LEGEND

DESCRIPTION	EXISTING
NATURAL GAS	UGG
TELEPHONE	OHT
UNDERGROUND TELEPHONE	UTL
ELECTRICITY	OHP
UNDERGROUND ELECTRICITY	UGP



SHEET INDEX

SCALE: 1" = 300'

GENERAL NOTES

1. SURVEYING AND BOUNDARY INFORMATION BY THOMAS AND HUTTON.
2. ALL ELEVATIONS SHOWN ARE BASED ON NAVD 88.
3. TOPOGRAPHIC SURVEY BY THOMAS AND HUTTON.
4. CONTRACTOR IS TO VERIFY ACCURACY OF ANY TEMPORARY BENCHMARKS SHOWN PRIOR TO UTILIZING THEM FOR CONSTRUCTION.
5. THERE ARE NO WETLANDS LOCATED ON THE PROPERTY. THERE ARE WETLANDS AND WETLAND BUFFERS LOCATED ADJACENT TO THE PROPERTY LINES. CONTRACTOR SHALL NOT ENCROACH ON WETLAND AREAS OR BUFFERS AND WILL TAKE PRECAUTIONS TO PREVENT ENCROACHMENT.
6. EXISTING INFORMATION SHOWN ADJACENT TO THE LIMITS OF THE PROJECT HAS NOT BEEN FIELD VERIFIED AND IS PROVIDED FOR GENERAL INFORMATION PURPOSES.
7. IF WORK IS SUSPENDED OR DELAYED FOR 14 DAYS, THE CONTRACTOR SHALL TEMPORARILY STABILIZE THE DISTURBED AREA AT NO ADDITIONAL COST TO THE OWNER.
8. THE CONTRACTOR SHALL INSTALL ANY BARRICADES PRIOR TO BEGINNING CONSTRUCTION
9. CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CONTACT ENGINEER IMMEDIATELY WITH ANY DISCREPANCIES.
10. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL AND PREVENTION STRUCTURES SHOWN ON THE PLANS. BOTH MUST BE APPROVED BY THE CITY OF HARDEEVILLE PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES.
11. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH OCRM GUIDELINES.
12. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION, IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETED AND THE SITE IS STABILIZED.
13. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE TRACKING OF MUD ONTO PAVED ROADWAY FROM CONSTRUCTION AREA. THE CONTRACTOR SHALL CLEAN AND RESTORE EACH EXISTING ROAD DAILY, AS MAY BE REQUIRED.
14. WATER ENCOUNTERED WHILE TRENCHING FOR UTILITIES OR EXCAVATION FOR PONDS MUST BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE DISCHARGING OFFSITE. THE PUMP INTAKE SHOULD HAVE A FLOAT OR SIT ON A BED OF ROCK TO PREVENT DREDGING AND THE DISCHARGE SHOULD BE THROUGH AN ENERGY DISSIPATER AND/OR SEDIMENT TRAP.
15. REFER TO SPECIFICATIONS, SECTION 02902, FOR GRASSING REQUIREMENTS AND SPECIFICATIONS.
16. VEHICLES LEAVING SITE MUST TRAVERSE CONSTRUCTION EXITS TO REMOVE MUD FROM TIRES.
17. OPEN SPACE AND LAGOON BANKS SHALL BE PERMANENTALY GRASSED. CLEARED AREAS SHALL BE TEMPORARILY GRASSED AND MEET ALL OCRM REGULATIONS.
18. ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN OBTAINED.
19. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED SIMULTANEOUSLY WITH THE DISTURBANCE OF THE LAND AND SHALL REMAIN FUNCTIONAL UNTIL THE CONTRIBUTING DISTURBED AREAS ARE STABILIZED. SILT BARRIERS WILL BE INSTALLED AS NECESSARY TO PREVENT EXCESSIVE SEDIMENTATION OF DOWNSTREAM AREAS. DEVICES SHALL BE IN ACCORDANCE WITH THE MANUAL OF "EROSION AND SEDIMENT CONTROL PRACTICES FOR DEVELOPING AREAS" BY THE S.C. LAND RESOURCES CONSERVATION COMMISSION.
20. CONTRACTOR SHALL GRADE AREAS TO DRAIN FOR POSITIVE FLOW PRIOR TO FINAL ACCEPTANCE.
21. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED.
22. ALL DRAINAGE WILL BE MADE FUNCTIONAL DAILY AS WORK PROGRESSES.
23. NEW PAVEMENT TO BE FLUSH WITH EDGE OF EXISTING PAVEMENT.
24. ALL STORM DRAIN PIPE INVERTS IN AND OUT ARE THE SAME AS THE BOX INVERT UNLESS OTHERWISE NOTED ON THE PLAN SHEETS AND/OR PROFILES.
25. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY BRACING, SHEETING AND DEWATERING TO COMPLETE THE PROJECT, PROTECT THE CONSTRUCTION WORKERS AND ALL ADJACENT STRUCTURES, TREES, LANDSCAPING, AND IS RESPONSIBLE FOR ALL REPAIR AND COST TO RETURN AREA TO ORIGINAL CONDITION.
26. ALL UTILITY POLES ADJACENT TO PROPOSED CONSTRUCTION MUST BE SECURED PRIOR TO ANY ADJACENT DISTURBANCE AND THE CONSTRUCTION PROCEDURE MUST BE ACCEPTABLE TO THE UTILITY COMPANY.
27. CONTROL OF STORMWATER THROUGHOUT THE CONSTRUCTION PERIOD SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE EXISTING DRAINAGE CONVEYANCES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ALL PENALTIES, CLAIMS AND FEES IMPOSED ON THE OWNER AS A RESULT OF DAMAGE CAUSED BY ACTIONS OF THE CONTRACTOR, THEIR EMPLOYEES OR SUBCONTRACTORS SHALL BE BORNE IN FULL BY THE CONTRACTOR.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES AND FOR AVOIDING ALL CONFLICTS WITH SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
29. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES BEFORE WORK COMMENCES, VERIFY UTILITIES WITHIN THE PROJECT LIMITS AND NOTIFY THE ENGINEER OF CONFLICTS OR VARIANCES TO THE PLANS PRIOR TO BEGINNING WORK OR PURCHASE OF MATERIALS.
30. CONTRACTOR SHALL COORDINATE REPAIRS TO EXISTING UTILITY LINES WITH THE LOCAL UTILITY.
31. IT IS THE OBLIGATION OF THE CONTRACTOR TO MAKE THEIR OWN INTERPRETATION OF ALL SURFACE AND SUBSURFACE DATA AVAILABLE AS TO THE NATURE AND EXTENT OF THE MATERIALS TO BE EXCAVATED, WASTED, GRADED, AND COMPACTED. THE INFORMATION SHOWN ON THESE PLANS IN NO WAY GUARANTEES THE AMOUNT OR NATURE OF THE MATERIAL TO BE ENCOUNTERED.
32. THE CONTRACTOR WILL NOTIFY THE ENGINEER IF UNSUITABLE MATERIAL IS DISCOVERED PRIOR TO BEGINNING ANY REMOVAL OPERATION.
33. ALL SUITABLE MATERIAL EXCAVATED FROM DITCHES AND SWALES SHALL BE USED ON SITE. ANY EXCESS MATERIAL SUITABLE OR UNSUITABLE SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE
34. ALL TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON "UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND "SOUTH CAROLINA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BOTH CURRENT EDITIONS.
35. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL DEVICES AND MEASURES AS NECESSARY TO MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO OWNER FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING CONSTRUCTION.
36. ALL WORK SHALL CONFORM TO APPLICABLE STATE, COUNTY AND MUNICIPAL REQUIREMENTS AND CODES.
37. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL THE PROPER PERMITS HAVE BEEN ISSUED
38. ALL CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN AN ACCEPTABLE WASTE DISPOSAL AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL CONSTRUCTION DEBRIS.
39. ANY DEFECTIVE, DAMAGED, OR UNSOUND PIPE SHALL BE REJECTED. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM INSIDE OF PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH AND SHALL BE KEPT CLEAN BY ACCEPTED MEANS DURING AND AFTER LAYING. CARE SHALL BE TAKEN TO PREVENT DIRT FROM ENTERING THE JOINT SPACE. AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS THE ENDS OF THE PIPE SHALL BE CLOSED BY ACCEPTABLE MEANS AND NO TRENCH WATER SHALL BE PERMITTED IN THE PIPE.
40. THE CONTRACTOR SHALL GRASS ALL AREAS DISTURBED BY CONSTRUCTION IMMEDIATELY AFTER THE WORK IN THOSE AREAS HAS CEASED.
41. THE DESIGN OF THE PAVEMENT AND EARTHWORK MATERIALS, PROCEDURES AND METHODS SPECIFIED ARE BASED ON THE CRITERIA AND RECOMMENDATIONS ESTABLISHED IN THE GEOTECHNICAL ENGINEERING REPORT PREPARED BY TERRACON CONSULTANTS, INC., DATED 9/7/2016 AND SUBSEQUENT ADDENDUMS. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT AND FOLLOW THE RECOMMENDATIONS OF THE REPORT. ANY CONFLICTS BETWEEN THE REPORT AND OTHER SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE ENGINEER WILL PROVIDE DIRECTION OR CLARIFICATION OF ANY CONFLICT.
42. ALL RCP STORM PIPE SHALL BE O-RING TYPE UNLESS SPECIFIED OTHERWISE.
43. ALL STORM PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC.
44. ALL STORM CROSSINGS WITH SEWER THAT ARE LESS THAN 18" BETWEEN PIPES SHALL BE BACKFILLED WITH STONE.
45. CONTRACTOR WILL BE REQUIRED TO ADJUST STRUCTURE FRAMES TO MATCH FINAL GRADE AT NO ADDITIONAL COST.
46. DRAINAGE IMPROVEMENTS TO BE INSTALLED PRIOR TO START OF VERTICAL CONSTRUCTION.
47. SCOPE OF CIVIL SITE SERVICES TERMINATES FIVE (5) FEET OUTSIDE OF BUILDING CONSTRUCTION LIMIT. SEE ARCHITECTURAL AND MECHANICAL PLANS BY OTHERS FOR BUILDING DESIGN REQUIREMENTS.
48. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL COORDINATE ALL WORK WITH THE OWNER AND UTILITY COMPANIES.
49. MAINTAIN A 10' (TEN FOOT) HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND WATER MAINS. WHERE THIS SEPARATION CAN NOT BE MAINTAINED, OR THE LINES CROSS, THE BOTTOM OF THE WATER MAIN SHALL BE 18" ABOVE THE TOP OF THE SEWER MAIN LAID IN SEPARATE TRENCHES.
50. SEWER LATERAL SHALL BE LAID AT A MINIMUM SLOPE OF ONE PERCENT.
51. MAINTAIN A 5' (FIVE FOOT) HORIZONTAL SEPARATION BETWEEN SANITARY SEWER AND STORM DRAINAGE LINES. VERTICAL SEPERATION SHALL BE IN ACCORDANCE WITH BJWSA SPECIFICATIONS.
52. CONTRACTOR SHALL COORDINATE TIE-IN OF NEW WATER AND SEWER FACILITIES WITH BEAUFORT/JASPER WATER AND SEWER AUTHORITY
53. CONTRACTOR SHALL MAINTAIN MINIMUM COVER OVER THE WATER MAIN PIPE BARREL OF 3'-0" UNLESS OTHERWISE INDICATED. TOP OF PIPE ELEVATIONS ARE SHOWN FOR CASES WHERE FUTURE STORM SEWERS ARE TO BE INSTALLED. IN NO CASE SHALL THE WATER MAIN BE INSTALLED AT A LOWER ELEVATION THAN SHOWN.
54. SHOULD PIPE, FITTINGS, AND OTHER MATERIALS BE NEEDED IN ADDITION TO THAT SHOWN ON THE DRAWINGS BECAUSE PIPELINE WAS NOT INSTALLED TO THE ALIGNMENT AND PROFILE SHOWN, THEN THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THOSE NECESSARY MATERIALS AND PROVIDING THE EQUIPMENT AND LABOR TO INSTALL THEM TO MEET THE DESIGN INTENT OF THE WATERMAIN AT NO ADDITIONAL COST TO THE OWNER.
55. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER 48 HOURS IN ADVANCE OF ALL REQUIRED TESTS AND INSPECTIONS.
56. ALL WATERMAINS SHALL BE POLYVINYL CHLORIDE (PVC C900) UNLESS OTHERWISE INDICATED.
57. ALL GRAVITY SEWER MAIN SHALL BE POLYVINYL CHLORIDE (PVC SDR26) UNLESS OTHERWISE INDICATED.
58. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES, EVEN THOSE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND TAKE STEPS TO PROTECT THE LINE(S) AND ENSURE CONTINUED SERVICE. DAMAGE CAUSED TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR SHALL CONFIRM THE CONNECTION POINTS OF NEW UTILITIES TO EXISTING UTILITIES PRIOR TO BEGINNING NEW CONSTRUCTION.

PROJECT INFORMATION

SITE DATA

COUNTY:	JASPER
CITY:	HARDEEVILLE
PROPERTY ZONING:	PDD
TAX MAP NUMBER:	031-00-00-016
FLOOD ZONE:	ZONE A8/ ZONE B
FEMA FLOOD MAP PANEL AND DATE:	45011 2 0225B SEPT 29, 1986
TOTAL SITE AREA:	21.1 AC
TOTAL DISTURBED AREA:	17.5 AC

OWNER: WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
ATTN: JOHN WORKMAN
1850 PARKWAY PLACE - SUITE 600
MARIETTA, GA 30067
(770) 590-3308

ENGINEER: THOMAS & HUTTON
ATTN: JASON CHAMBLESS
50 PARK OF COMMERCE WAY
SAVANNAH, GA 31405
(912) 234-5300

UTILITY: BEAUFORT JASPER WATER & SEWER AUTHORITY (BJWSA)
SOUTH CAROLINA ELECTRI & GAS (SCE&G)
HARGRAY COMMUNICATIONS

SOUTH CAROLINA — THOMAS & HUTTON ENGINEERING — No. C00285 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 32405 — JASON O. CHAMBLESS — 10/31/17

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

GENERAL NOTES, LEGENDS, & SHEET INDEX

JOB NO:	J-26810.0001
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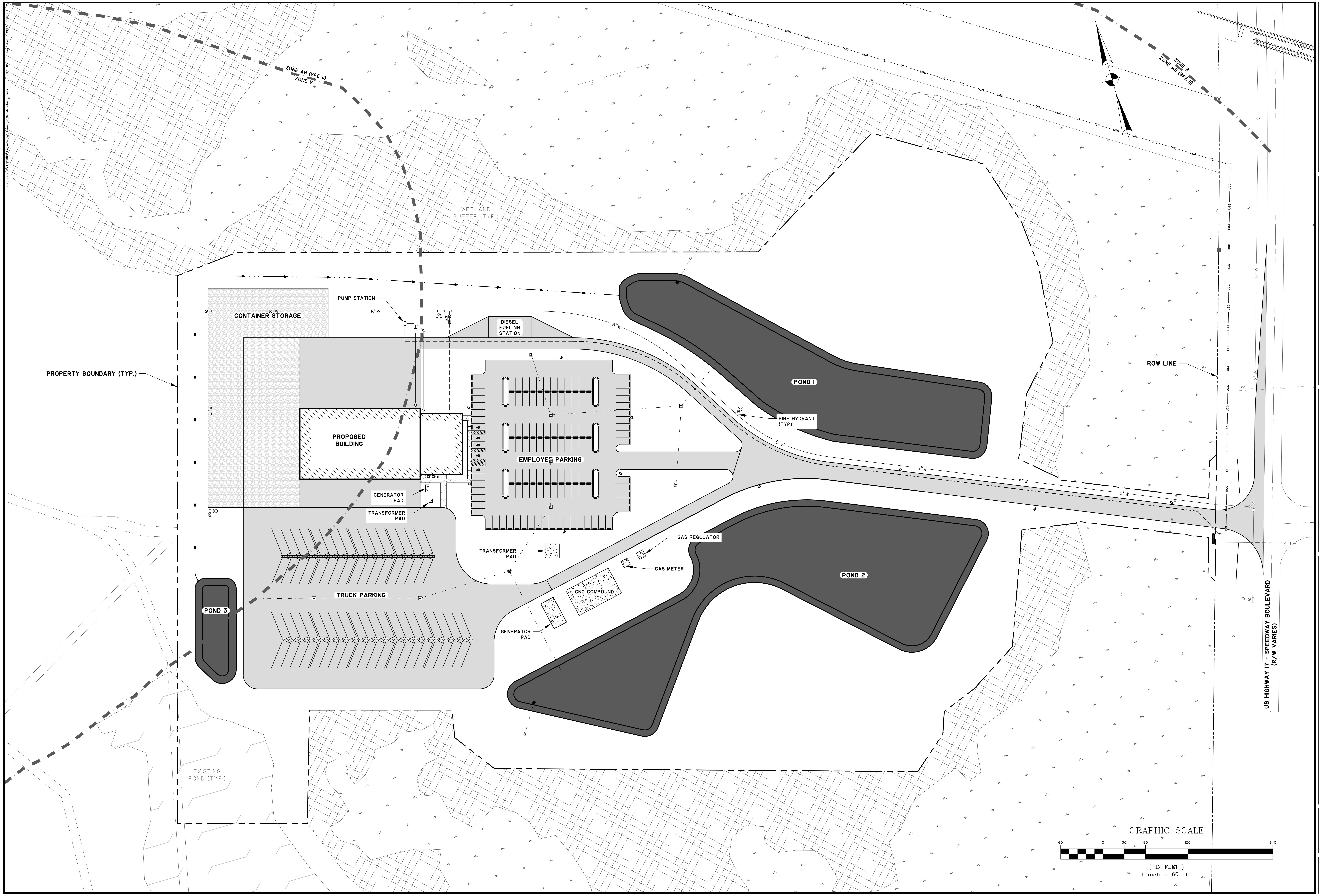
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 300'

G1.1



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HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

OVERALL SITE LAYOUT

JOB NO:	J-26810.0001
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DRAWN:	WHE
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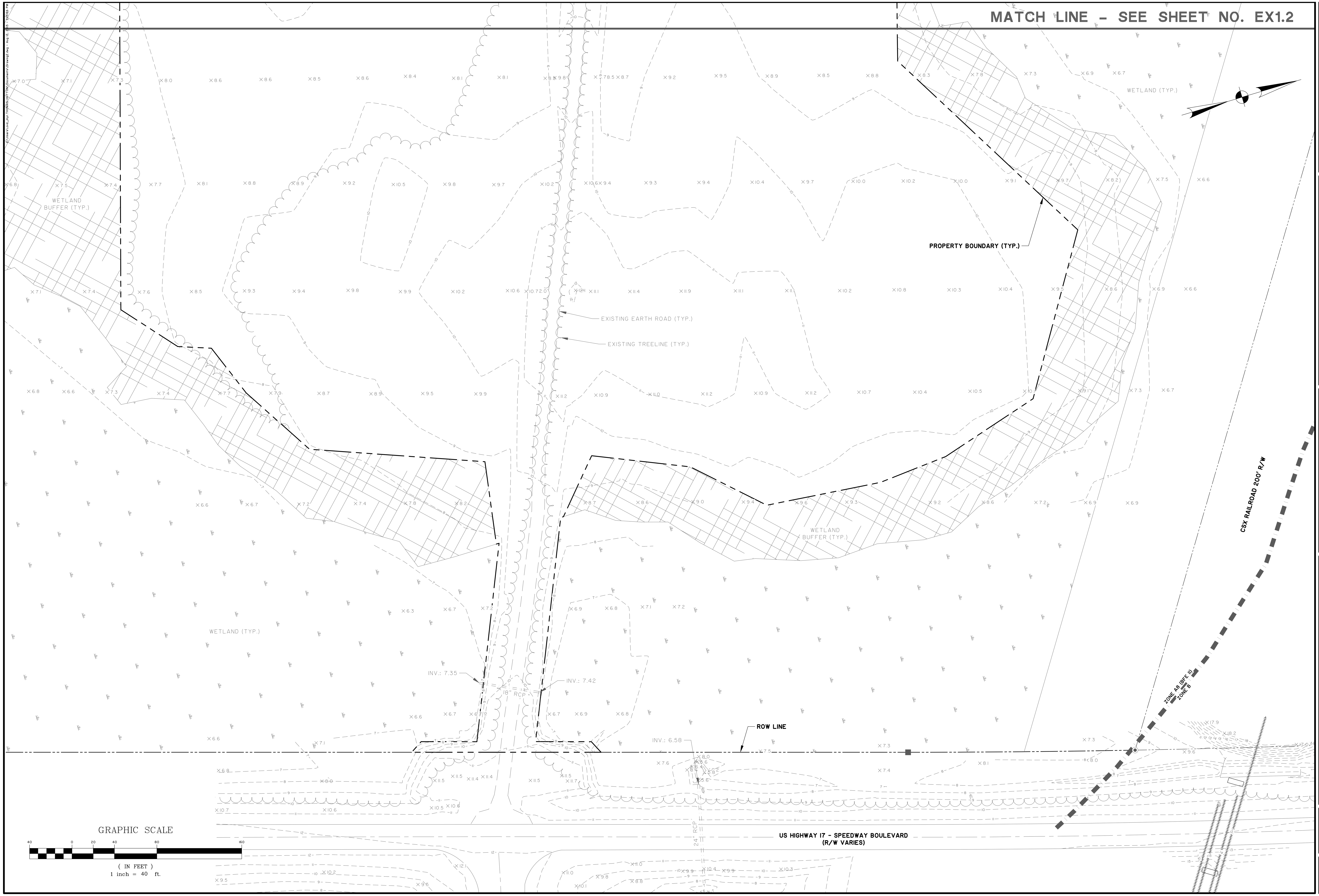
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 60'

G1.2



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HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

EXISTING CONDITIONS

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DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

EX1.1

MATCH LINE - SEE SHEET NO. EX1.1

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SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

NO.	REVISIONS	BY	DATE

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
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EX1.2

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STORMWATER POLLUTION PREVENTION PLAN

I. SITE DESCRIPTION

A. PROJECT DESCRIPTION

A.1.	PROJECT AREA	21.05 ACRES
A.2.	AREA DISTURBED	17.5 ACRES
A.3.	PERCENT IMPERVIOUS AREA BEFORE CONSTRUCTION	0 %
A.4.	RUNOFF COEFFICIENT BEFORE CONSTRUCTION	53 CN
A.5.	PERCENT IMPERVIOUS AREA AFTER CONSTRUCTION	31 %
A.6.	RUNOFF COEFFICIENT AFTER CONSTRUCTION	73 CN

B. DESCRIPTION OF CONSTRUCTION ACTIVITY

WORK CONSISTS OF CLEARING, GRADING, UTILITY INSTALLATION, DRAINAGE IMPROVEMENTS PAVING AND CONSTRUCTION OF A 22,000 SF BUILDING.

C. RUNOFF DATA

C.1.	SOIL CLASSIFICATIONS:	(HSG) A/B/C
C.2.	LAND USE(S):	INDUSTRIAL PARK

D. RECEIVING WATERS

D.1.	CLOSEST RECEIVING WATERS:	TRIBUTARY TO LITTLE BACK RIVER
D.2.	ULTIMATE RECEIVING WATERS:	LITTLE BACK RIVER

E. FLOOD

E.1.	FEMA FLOOD ZONE(S):	B/A8
E.2.	FEMA FLOOD INSURANCE MAP(S):	450112 0225 B

II. CONTROL MEASURES

1. EROSION AND SEDIMENT CONTROLS

PRIOR TO START OF CONSTRUCTION, ALL EXTERIOR SILT FENCE WILL BE INSTALLED AS SHOWN ON THE PLANS.

1.1. CLEARING

1.1.1. AS CLEARING IS COMPLETED, ADDITIONAL SILT FENCE WILL BE INSTALLED WHERE NECESSARY, SUCH AS POINTS WHERE FLOWS BECOME CHANNELIZED, AND OTHER POINTS WHERE EXCESSIVE RUNOFF VELOCITIES MAY OCCUR.
1.1.2. INSTALL CONSTRUCTION ENTRANCES / EXITS BEFORE BEGINNING CLEARING
1.1.3. CONSTRUCTION DELAYS IN ANY ONE AREA GREATER THAN 14 DAYS PRIOR TO START OF ROUGH GRADING WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.
1.1.4. MAINTAIN EXISTING VEGETATION WHENEVER POSSIBLE AND MINIMIZE THE AREA OF DISTURBANCE. RETAIN AND PROTECT TREES TO ENHANCE FUTURE LANDSCAPING EFFORTS AND REDUCE RAINDROP IMPACT.
1.1.5. INSTALL ALL SEDIMENT CONTROL PRACTICES PRIOR TO ANY UP-SLOPE SOIL DISTURBING ACTIVITIES.
1.1.6. PHASE CONSTRUCTION ACTIVITIES TO MINIMIZE THE AREAS DISTURBED AT ONE TIME. THIS WILL ALSO ALLOW COMPLETED AREAS TO BE STABILIZED AND RE-VEGETATED BEFORE DISTURBING ADJACENT SITES. THE NEED FOR TEMPORARY EROSION CONTROL MEASURES MAY BE AVOIDED BY COMPLETING A PHASE AND INSTALLING PERMANENT EROSION CONTROL MEASURES WHEN THE FINAL GRADE IS ATTAINED.
1.1.7. MAINTAIN AND PROTECT ALL NATURAL WATERWAYS. RETAIN AT LEAST A 35-FOOT UNDISTURBED BUFFER OF NATURAL VEGETATION ALONG ALL WATERWAYS TO FILTER OUT SEDIMENT AND OTHER POLLUTANTS. MAINTAIN A 45-FOOT UNDISTURBED BUFFER AROUND SENSITIVE WATERS.
1.1.8. INSTALL SILT FENCE (OR BIO ROLLS/ROCK SOCK PRODUCTS) ON THE DOWN-SLOPE PERIMETER OF ALL DISTURBED AREAS PRIOR TO ANY SOIL DISTURBING ACTIVITIES (INCLUDING CLEARING AND GRUBBING). SILT FENCE CAN TREAT A MAXIMUM OF 100 SQUARE FEET PER LINEAL FOOT OF FENCE. INSTALL SILT FENCE IN SHORTER REACHES ON THE CONTOUR WITH EACH END TURNED UP-SLOPE . SWALES AND SHORELAND AREAS SHOULD ALSO BE PROTECTED WITH SILT FENCE, BIO ROLLS, OR ROCK SOCKS.
1.1.9. IN AREAS OF CONCENTRATED FLOW INSTALL STRAW BALE CHECKS, ROCK CHECK DAMS, TRIANGULAR DIKES, BIO ROLL BLANKETS, OR ROCK SOCKS TO SLOW RUNOFF AND TRAP SEDIMENT.

1.1.10. USE TEMPORARY SLOPE DRAINS OR ROCK CHUTES TO MOVE WATER DOWN STEEP SLOPES.

1.1.11. CONSTRUCT SEDIMENT BASINS FOR DRAINAGE AREAS GREATER THAN 10 ACRES

1.2. ROUGH GRADING

1.2.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING ROUGH GRADING, DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.
1.2.2. ALL AREAS NOT SUBJECT TO FURTHER CONSTRUCTION (DRAINAGE, SANITARY SEWER, ROADS, WATER DISTRIBUTION SYSTEMS, OR STORM WATER FACILITIES) SHALL BE GRASSED WITH A PERMANENT COVER.
1.2.3. COVER ANY STOCK PILED TOPSOIL WITH PLASTIC (OR OTHER IMPERVIOUS COVERING) OR USE A TEMPORARY SEED MIX. USE STOCKPILED TOPSOIL AS EARTHEN BERMS TO SERVE AS TEMPORARY SEDIMENT BASINS.

1.3. DRAINAGE

1.3.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING DRAINAGE INSTALLATION.
1.3.2. CONSTRUCTION DRAINAGE WILL BE ROUTED THROUGH LAKES, WHICH WILL ACT AS SEDIMENT BASINS OR OTHER ACCEPTABLE SEDIMENT BASINS/TRAPS.
1.3.3. STORM DRAIN INLET PROTECTION AS SHOWN ON DETAIL SHEET SHALL BE INSTALLED ON ALL CURB INLETS, STORM DRAIN MANHOLES, JUNCTION BOXES, AND GRATE INLETS.
1.3.4. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF THE NEXT CONSTRUCTION SEQUENCE WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.
1.3.5. ALL STORM LINES NOT IN STREETS OR OTHER PAVED AREAS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL.

1.4. WASTE DISTRIBUTION SYSTEM INSTALLATION

1.4.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING INSTALLATION OF THE WATER DISTRIBUTION SYSTEM.
1.4.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.5. WASTEWATER COLLECTION SYSTEM INSTALLATION

1.5.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING INSTALLATION OF THE WASTEWATER SYSTEM.
1.5.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.6. CONSTRUCTION OF ROADS

1.6.1. ALL EXISTING CONTROLS WILL BE MAINTAINED DURING ROAD CONSTRUCTION.
1.6.2. DELAYS OF GREATER THAN 14 DAYS PRIOR TO START OF NEXT ACTIVITY WILL MANDATE STABILIZATION PROCEDURES. ACCEPTABLE METHODS OF STABILIZATION INCLUDE MULCHING AND TEMPORARY SEEDING.

1.7. GRASSING

1.7.1. ALL EXISTING CONTROLS WILL BE MAINTAINED UNTIL GRASSING IS ESTABLISHED
1.7.2. ANY AREAS THAT ERODE OR WHERE GRASS DOES NOT ESTABLISH ITSELF SHALL BE RE-GRADED AND RE-GRASSED.

2. STORM WATER MANAGEMENT

RUNOFF FROM THIS PROJECT WILL DISCHARGE INTO A STORM WATER MANAGEMENT SYSTEM. TREATMENT WILL OCCUR IN STORM WATER DETENTION PONDS.

3. OTHER CONTROLS

3.1. WASTE DISPOSAL

3.1.1. NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO ANY RECEIVING WATERS.
3.1.2. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.
3.1.3. THIS PLAN SHALL COMPLY WITH STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.
3.1.4. DUST CONTROL ON DISTURBED AREAS - CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE AND HAUL ROUTES. THE PURPOSE OF THE MEASURE IS TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES, WHICH MAY BE HARMFUL OR INJURIOUS TO HUMAN HEALTH, WELFARE OR SAFETY, OR TO ANIMALS OR PLANT LIFE.

III. MAINTENANCE

1. MAINTENANCE PROGRAM

1.1. THE SITE SUPERINTENDENT, OR HIS/HER REPRESENTATIVE, SHALL MAKE VISUAL INSPECTIONS OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER HEAVY RAINFALL EVENT TO INSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY.

1.2. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE. ALL DRAINAGE SWALES, POCKETS, DEPRESSION, LOW LINES, AND OUTLET DITCHES SHALL DRAIN EFFECTIVELY AT ALL TIMES. SETTLEMENT OR WASHING THAT MAY OCCUR SHALL BE REPAIRED BY THE CONTRACTOR. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN AN EFFECTIVE BARRIER. MAINTAIN THE CONSTRUCTION EXIT IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TACKED ONTO PUBLIC ROADWAYS. RESEED AND MULCH AREA WHERE SEEDING EMERGENCE IS POOR, OR WHERE EROSION OCCURS. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE. INSPECT ALL MULCHES PERIODICALLY, AND AFTER RAINSTORMS TO CHECK FOR EROSION, DISLOCATION OR FAILURE. IF WASHOUT OCCURS, REPAIR THE SLOPE GRADE, RESEED AND REINSTALL MULCH. FOLLOW THE CONSTRUCTION SEQUENCE THROUGHOUT THE PROJECT DEVELOPMENT. WHEN CHANGES IN CONSTRUCTION ACTIVITIES ARE NEEDED, AMEND THE SEQUENCE SCHEDULE IN ADVANCE TO MAINTAIN MANAGEMENT CONTROL. IF MAJOR CHANGES ARE NECESSARY, SEND A COPY OF THE MODIFIED SCHEDULE TO THE ENGINEER, SEDIMENT AND EROSION CONTROL MEASURES WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE DISTURBED AREAS ARE STABILIZED.

2. SILT FENCE

SILT FENCES WILL BE MONITORED DURING CONSTRUCTION. ANY SILT FENCE WHICH IS NOT FUNCTIONING PROPERLY WILL BE PROMPTLY REPAIRED. CLEAN OUT THE SILT FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE OR REPLACE WITH FUNCTIONAL SILT FENCE WITHIN 24 HOURS. USE OF HOSES AND WATER TO FLUSH THE SEDIMENT INTO THE STORM INLETS IS UNACCEPTABLE.

3. SEDIMENTATION BASINS

SEDIMENTATION BASINS WHICH ARE AT 50% USED CAPACITY OR APPROACHING SUCH CAPACITY SHALL BE RE-EXCAVATED TO ORIGINAL DIMENSIONS AND THE SILT PROPERLY DISPOSED OF.

4. SEDIMENT LOGS/ROLLS

SEDIMENT LOGS/ROLLS OR OTHER CONTROL MEASURES WHICH BEGIN TO DISINTEGRATE OR FUNCTION INEFFECTIVELY SHALL BE PROMPTLY REPLACED.

5. VEGETATION COVER

ANY VEGETATION COVER SERVING TO STABILIZE DISTURBED SOILS WHICH IS ITSELF DISTURBED SHALL IMMEDIATELY BE REPLACED.

6. CONSTRUCTION ENTRANCE

MAINTAIN ROCK CONSTRUCTION ENTRANCE AND CLEAN ADJACENT ROADS OF ANY MUD TRACKED ONTO THEM.

IV. INSPECTIONS

1. QUALIFIED PERSONNEL WILL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT BEEN FINALLY STABILIZED, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. WHERE SITES HAVE BEEN FINALLY STABILIZED SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH DURING THE WARRANTY PERIOD.

2. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING.

3. A WRITTEN REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, WEATHER INFORMATION FOR THE PERIOD SINCE THE LAST INSPECTION (OR SINCE COMMENCEMENT OF CONSTRUCTION ACTIVITY) INCLUDING A BEST ESTIMATE OF THE BEGINNING OF EACH STORM EVENT, DURATION OF EACH STORM EVENT, APPROXIMATE AMOUNT OF RAINFALL FOR EACH STORM EVENT (IN INCHES) AND WHETHER ANY DISCHARGES OCCURRED, LOCATION(S) OF DISCHARGES OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE, LOCATION(S) OF BMP'S THAT NEED MAINTENANCE, LOCATION(S) OF BMP'S THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, LOCATION(S) WHERE ADDITIONAL BMP'S ARE NEEDED THAT DID NOT EXIST AT THE TIME OF INSPECTION AND ANY CORRECTIVE ACTION REQUIRED INCLUDING ANY CHANGES TO SWPPP NECESSARY AND IMPLEMENTATION DATES.

4. THE REPORT SHALL BE MAINTAINED AT LEAST THREE YEARS FROM THE DATE THE SITE IS FINALLY STABILIZED. THE REPORT MUST BE SIGNED AND SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN AND THE NPDES PERMIT REFERENCED ABOVE. THE CONTRACTOR SHALL MAINTAIN THIS REPORT. THE REPORT SHALL BE SUBMITTED TO THE ENGINEER AND OWNER.

V. LONG TERM MAINTENANCE OF DRAINAGE AND STORM WATER MANAGEMENT SYSTEM

THE ROADS AND DRAINAGE SYSTEM WILL BE OWNED AND MAINTAINED BY WASTE MANAGEMENT OF SOUTH CAROLINA, INC. AFTER CONSTRUCTION IS COMPLETE.

VI. SC DHEC STANDARD NOTES

1. IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO GRASSING / HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.

2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW:

2.1. WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
2.2. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.

3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF SITE INSPECTIONS IDENTIFY BMP'S THAT ARE DAMAGED OR ARE NOT OPERATING EFFECTIVELY, MAINTENANCE MUST BE PERFORMED AS SOON AS PRACTICAL OR AS REASONABLY POSSIBLE BEFORE THE NEXT STORM EVENT WHENEVER PRACTICAL.

4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE ANY SEDIMENTS BEFORE BEING PUMPED INTO ANY WATERS OF THE STATE.

5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT AS MAY BE REQUIRED.

7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C. REG. 72-300 AND SCR100000.

8. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

9. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN NOT BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS

10. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.

11. A COPY OF THE SWPPP, INSPECTION RECORDS AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.

12. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.

13. MINIMIZE SOIL COMPACTION IN AREAS NOT UNDER PAVEMENTS AND /OR STRUCTURES AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

14. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUAL OR BETTER TREATMENT PRIOR TO DISCHARGE.

15. MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).

16. THE FOLLOWING DISCHARGES ARE PROHIBITED:

16.1. WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
16.2. WASTEWATER FROM WASHOUT AND CLEANOUT OF OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
16.3. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
16.4. SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.

17. AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.

18. IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF PERMIT SCR100000 AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.

19. A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE, THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

VII. EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES

1. THE IMPLEMENTATION OF THESE EROSION SEDIMENT CONTROL (ESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.

2. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.

3. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT LEAVE THE SITE.

4. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

5. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A MAJOR STORM EVENT.

6. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING AND PRIOR TO FINAL INSPECTION. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

7. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

8. BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY, THE EXISTING STORM WATER INLET(S) THAT RECEIVING RUNOFF FROM THE PROPOSED WORK AREA SHALL BE PROTECTED. THE TEMPORARY INLET PROTECTION MUST REMAIN IN PLACE UNTIL THE CONSTRUCTION ACTIVITY IS COMPLETED, THE STREET HAS BEEN SWEPT AND ANY EXPOSED SOILS ARE STABILIZED. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVING ANY TEMPORARY INLET PROTECTION INSTALLED; AFTER ALL DISTURBED AREAS ARE STABILIZED. TEMPORARY PROTECTION OF THE INLETS MAY BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING:

8.1. USE OF GRAVEL BAGS TO FILTER THE SEDIMENT FROM ANY RUNOFF. TO MAKE A GRAVEL BAG, USE A BAG MADE OF GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH EITHER 3/4 INCH ROCK OR 1/4 INCH PEA GRAVEL.
8.2. USE OF SEDIMENT LOGS TO FILTER THE SEDIMENT FROM ANY RUNOFF (AVAILABLE THROUGH LOCAL EROSION CONTROL SUPPLIERS).
8.3. USE OF ABOVE OR UNDER-GRATE FILTER BAGS OR DEVICES TO FILTER THE SEDIMENT FROM ANY RUNOFF (AVAILABLE THROUGH EROSION CONTROL SUPPLIERS).

9. WATER MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION, SEDIMENTATION, OR FLOODING ON THE SITE, ON DOWNSTREAM PROPERTIES, IN THE RECEIVING CHANNELS, OR IN ANY STORM WATER INLET. WHEN SITE DEWATERING, WATER PUMPED FROM THE SITE, INCLUDING TRENCHES, SHALL BE TREATED BY ONE OF THE FOLLOWING:

9.1. TEMPORARY SEDIMENTATION BASINS
9.2. SEDIMENT FILTERING BAGS

10. THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL EXISTING UTILITIES. EXISTING UTILITIES ARE ALL UTILITIES THAT EXIST ON THE PROJECT IN AN ORIGINAL, RELOCATED OR NEWLY INSTALLED POSITION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGED UNDERGROUND OR OVERHEAD FACILITIES, EVEN IF THE UTILITY IS NOT SHOWN ON THE SITE DEVELOPMENT PLANS. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITIES PROTECTION CENTER TO COORDINATE THE MARKING OF EXISTING UTILITY LINES A MINIMUM OF 96 HOURS PRIOR TO COMMENCEMENT OF ANY WORK.

11. THE CONTRACTOR SHALL FLUSH ALL INLETS AND PIPE AT THE COMPLETION OF CONSTRUCTION TO REMOVE SILT AND DEBRIS. THE CLEANING AND FLUSHING OF INLETS AND PIPE (EXISTING AND PROPOSED) SHALL BE CONSIDERED PART OF THE COST FOR THE PROJECT.

12. EGRESS FROM THE SITE SHALL BE CONTROLLED SUCH THAT VEHICLES LEAVING THE SITE MUST TRAVERSE CONSTRUCTION EXITS TO REMOVE MUD FROM TIRES.

13. SCHEDULE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXPOSED AREA AND DURATION OF EXPOSURE. IN SCHEDULING, TAKE INTO ACCOUNT THE SEASON AND THE WEATHER FORECAST.

14. EROSION CONTROL MEASURES ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL CONTROL MEASURES AS DICTATED BY ACTUAL FIELD CONDITIONS AT THE TIME OF CONSTRUCTION IN ORDER TO PREVENT EROSION AND CONTROL SEDIMENT. EROSION AND SEDIMENT CONTROL MEASURES WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE ENTIRE PROJECT IS TERMINATED OR SUSPENDED FOR AND INDEFINITE LENGTH OF TIME, ALL DISTURBED AREAS SHALL BE PLANTED WITH PERMANENT VEGETATION.

15. THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS, OR IN ANY WAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, IS BASED UPON FIELD INVESTIGATIONS AND IS BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME IS SHOWN AS INFORMATION ONLY, IS NOT GUARANTEED AND DOES NOT BIND THOMAS & HUTTON, OR THE OWNER IN ANY WAY.

16. CONTRACTOR SHALL MAINTAIN SITE ON A DAILY BASIS TO PROVIDE FOR POSITIVE DRAINAGE. CONTRACTOR, AT HIS COST, SHALL GRADE SITE AND PROVIDE NECESSARY TEMPORARY DRAINAGE SWALES TO INSURE STORM WATER DOES NOT POND ON SITE.

17. SITE DRAINAGE SHALL BE ESTABLISHED TO PREVENT ANY PONDED WATER CONDITIONS WITHIN THE CONSTRUCTION AREA AND TO FACILITATE STORM WATER DISCHARGE.

18. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.

19. LIME RATES AND ANALYSIS:

19.1. AGRICULTURAL LIME SHALL BE APPLIED AT THE RATE SHOWN IN THE SEEDING SECTION UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME APPLICATION SHALL BE WITHIN THE SPECIFICATIONS OF THE SOUTH CAROLINA DEPARTMENT OF AGRICULTURE.

20. MULCHING:

MULCHING IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:

20.1. DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF TWO TONS PER ACRE. DRY HAY SHALL BE APPLIED AT THE RATE OF 2 1/2 TONS PER ACRE.
20.2. WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT A RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER HYDRAULIC SEEDING.
20.3. ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 3/4:1 OR STEEPER.
20.4. SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE.
20.5. PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.
20.6. WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLACK SOD, MULCH IS NOT REQUIRED.
20.7. ON SLOPES GREATER THAN 10 FEET IN LENGTH AND 4:1 OR STEEPER, USE THE FOLLOWING EROSION CONTROL BLANKETS THAT HAVE BEEN PROPERLY ANCHORED TO THE SLOPE ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS:

- 2:1 SLOPES OR STEEPER: - STRAW/COCONUT BLANKET OR HIGH VELOCITY WOOD BLANKET
- 3:1 SLOPES OR STEEPER: - WOOD OR STRAW BLANKET WITH NET ON BOTH SIDES
- 4:1 SLOPES OR FLATTER: - WOOD OR STRAW MULCH BLANKET WITH NET ON ONE SIDE

VIII. HOUSEKEEPING

THESE PERFORMANCE STANDARDS APPLY TO ALL SITES.

1. PETROLEUM PRODUCTS: INCLUDING OIL, GASOLINE, LUBRICANTS AND ASPHALTIC SUBSTANCES.

1.1. HAVE EQUIPMENT TO CONTAIN AND CLEAN UP PETROLEUM SPILLS IN FUEL STORAGE AREAS OR ON MAINTENANCE AND FUELING VEHICLES
1.2. STORE IN COVERED AREAS PROTECTED WITH DIKES

2. SPILLS: PREVENTION AND RESPONSE.

2.1. STORE AND HANDLE MATERIALS TO PREVENT SPILLS
2.2. TIGHTLY SEALED CONTAINERS, NEAT AND SECURE STACKING, ETC.
2.3. REDUCE STORM WATER CONTACT IF SPILL OCCURS
2.3.1. CLEANUP PROCEDURES SHOULD BE CLEARLY POSTED.
2.3.2. CLEANUP MATERIALS SHOULD BE READILY AVAILABLE
2.3.3. STOP THE SOURCE
2.3.4. CONTAIN THE SPILL

3. NON-STORM WATER DISCHARGES

THE FOLLOWING NON-STORMWATER DISCHARGES MUST BE PROTECTED FROM CAUSING POLLUTION OR EROSION:

3.1. DISCHARGES FROM FIRE-FIGHTING ACTIVITIES
3.2. FIRE HYDRANT FLUSHINGS
3.3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED
3.4. WATER USED TO CONTROL DUST
3.5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHINGS
3.6. ROUTINE EXTERNAL BUILDING WASH DOWN THAT DOES NOT USE DETERGENTS
3.7. PAVEMENT WASH WATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILLED MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED
3.8. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE
3.9. UNCONTAMINATED GROUND WATER OR SPRING WATER
3.10. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS
3.11. UNCONTAMINATED EXCAVATION DEWATERING
3.12. LANDSCAPE IRRIGATION
3.13. DECHLORINATED SWIMMING POOL DISCHARGES.

4. CONSTRUCTION WASTES: DEMOLITION RUBBLE, PACKAGING MATERIALS, SCRAP BUILDING SUPPLIES, ETC.

4.1. SELECT A DESIGNATED WASTE COLLECTION AREA
4.2. PROVIDE LIDS FOR WASTE CONTAINERS
4.3. WHEN POSSIBLE LOCATE CONTAINERS IN COVERED AREA
4.4. MAINTAIN CONSISTENT REMOVAL SCHEDULE FOR WASTE

5. PESTICIDES: REDUCE THE AMOUNT OF PESTICIDES AVAILABLE FOR CONTACT WITH STORM WATER.

5.1. STORE IN A DRY COVERED AREA
5.2. INSTALL CURBS OR DIKES AROUND STORAGE AREA TO PROTECT AGAINST SPILLS
5.3. STRICTLY FOLLOW RECOMMENDED APPLICATION RATES

6. FERTILIZERS AND DETERGENTS: REDUCE THE AMOUNT OF FERTILIZERS AND DETERGENTS AVAILABLE FOR CONTACT WITH STORM WATER.

6.1. LIMIT APPLICATION OF FERTILIZERS TO THE MINIMUM NEEDED
6.2. APPLY MORE FREQUENTLY BUT AT LOWER APPLICATION RATES
6.3. LIMIT USE OF DETERGENTS ON-SITE
6.4. DO NOT DISCHARGE WASH WATER INTO STORM WATER SYSTEM
6.5. MAINTAIN STRUCTURAL AND VEGETATIVE BMP'S
6.6. APPLY ACCORDING TO SOIL TEST RECOMMENDATIONS PRIOR TO SEEDING.

IX. GRASSING NOTES

1. SOD:

ALL SOD SHALL BE NURSERY GROWN AS CLASSIFIED IN THE ASPS GSS. MACHINE CUT SOD AT A UNIFORM THICKENS OF 3/4" WITHIN A TOLERANCE OF 1/4", EXCLUDING TOP GROWTH AND THATCH. EACH INDIVIDUAL SOD PIECE SHALL BE STRONG ENOUGH TO SUPPORT ITS OWN WEIGHT WHEN LIFTED BY THE ENDS. BROKEN PODS, IRREGULARLY SHAPED PIECES, AND TORN OR UNEVEN ENDS WILL BE REJECTED. WOOD PEGS AND / OR WIRE STAPLES SHALL REPLACE SOD WITH AN EQUAL SOD COMPOSITION AS THAT WHICH IS EXISTING. IF NO SOD TYPE EXIST. THEN THE FOLLOWING SOD COMPOSITION SHALL BE USED.

2. SODDING SCHEDULE:

LAY SOD FROM MAY 1 TO SEPTEMBER 15 FOR SPRING PLANTING AND FROM SEPTEMBER 15 TO NOVEMBER 1 FOR FALL PLANTING.

3. SEED:

ALL SEED SHALL CONFORM TO ALL STATE LAWS AND TO ALL REQUIREMENTS AND REGULATIONS OF THE SOUTH CAROLINA DEPARTMENT OF AGRICULTURE. THE SEVERAL VARIETIES OF SEED SHALL BE INDIVIDUALLY PACKAGED OR BAGGED, AND TAGGED TO SHOW NAME OF SEED, NET WEIGHT, ORIGIN, GERMINATION, LOT NUMBER, AND OTHER INFORMATION REQUIRED BY THE DEPARTMENT OF AGRICULTURE.

3.1. PENNISETUM GLAUCIUM (BROWNTOP MILLET): TESTING 98 PERCENT PURITY AND 85 PERCENT GERMINATION.
3.2. BERMUDA COMMON: TESTING 98 PERCENT PURITY AND 85 PERCENT GERMINATION.
3.3. DOMESTIC ITALIAN RYE: TESTING 98 PERCENT PURITY AND 90 PERCENT GERMINATION.

4. MISCELLANEOUS:

4.1. PERMANENT SEEDING SHALL COVER ALL DISTURBED AREA NOT TO BE COVERED BY LANDSCAPE PLANTING BEDS, STRUCTURE, OR PAVEMENT.
4.2. SEED ALL DISTURBED AREAS WITHIN SEVEN DAYS OF FINAL GRADING AND TEMPORARY SEED/MULCH ALL AREAS THAT WILL BE LEFT INACTIVE FOR MORE THAN FOURTEEN (14) DAYS.
4.3. ALL PERMANENT GRASS PLANTINGS SHALL BE MULCHED
4.4. CENTIPEDE SOD CAN BE USED AS PERMANENT COVER ANYTIME EXCEPT JUNE THRU OCTOBER
4.5. IF GRASSING OCCURS DURING A MONTH REQUIRING TEMPORARY COVER, THE CONTRACTOR SHALL APPLY PERMANENT COVER (IN ADDITION TO THE TEMPORARY COVER) AT THE APPROPRIATE TIME AT NO NO ADDITIONAL COST. THE CONTRACTOR MUST ACHIEVE A STRAND OF PERMANENT GRASS WITH AT LEAST 95% COVER. BARE SPOTS CAN NOT BE MORE THAN 1 INCH SQUARE IN ANY 10 SF.

X. PERMANENT STABILIZATION

NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC,EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL ESTABLISHED. IF NECESSARY, AREAS MUST BE RE-WORKED AND RE-STABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY ,OR TOPSOIL EROSION IS EVIDENT. ONE OR MORE OF THE FOLLOWING MAY APPLY TO THE SITE.

4.1. SEEDED AREAS

FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

4.2. SODDED AREAS

FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE APPROVED MULCH MATERIAL.

4.3. PERMANENT MULCH

FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL.

4.4. RIPRAP

FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF AN APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP.

4.5. DITCHES, CHANNELS, AND SWALES

FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIPRAP LINING, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN CUTTING OF THE CHANNEL.

XI. FERTILIZER REQUIREMENTS

1. TEMPORARY SEEDING FERTILIZER

APPLY A MINIMUM OF 500 LBS PER ACRE OF A COMPLETE 10-10-10 FERTILIZER (11.5 POUNDS PER 1000 SQUARE FEET) OR EQUIVALENT DURING TEMPORARY SEEDING OF GRASSES UNLESS A SOIL TEST INDICATES A DIFFERENT REQUIREMENT. INCORPORATE FERTILIZER AND LIME (IF USED) INTO THE TOP 4-6 INCHES OF THE SOIL BY DISKING OR OTHER MEANS WHERE CONDITIONS ALLOW. LIME IS NOT REQUIRED FOR TEMPORARY SEEDING UNLESS A SOIL TEST SHOWS THAT THE SOIL PH IS BELOW 5.0. IT IS DESIRABLE TO APPLY LIME DURING THE TEMPORARY SEEDING OPERATION TO BENEFIT THE LONG-TERM PERMANENT SEEDING. APPLY A MINIMUM OF 1.5 TONS OF LIME / ACRE (70LBS. / 1000 SQ. FT.).

2. PERMANENT SEEDING FERTILIZER

APPLY A MINIMUM OF 1000 LBS PER ACRE OF A COMPLETE 10-10-10 FERTILIZER (23 POUNDS PER 1000 SQUARE FEET) OR EQUIVALENT DURING PERMANENT SEEDING OF GRADES UNLESS A SOIL TEST INDICATES A DIFFERENT REQUIREMENT. INCORPORATE FERTILIZER AND LIME (IF USED) INTO THE TOP 4-6 INCHES OF THE SOIL BY DISKING OR OTHER MEANS WHERE CONDITIONS ALLOW. DO NOT MIX THE LIME AND THE FERTILIZER PRIOR TO THE FIELD APPLICATION. UNLESS A SPECIFIC SOIL TEST INDICATES OTHERWISE, APPLY 1 & 1/2 TONS OF GROUND COARSE TEXTURED AGRICULTURAL LIMESTONE PER ACRE (70 LBS. / 1000 SQ.FT.).

XII. SWPP PREPARER CERTIFICATION

I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 14 OF THE CODE OF LAWS OF SC, 1976 AS AMENDED, PURSUANT TO REGULATION 72-300 ET SEQ. (IF APPLICABLE), AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCR100000.

THOMAS & HUTTON ENGINEERING CO. No. C00285

JASON O. CHAMBLESS
10/31/17

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NO.	REVISIONS	BY	DATE

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SWPP - NOTES

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
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APPROVED:	JOC
SCALE:	N/A

EC0.1

STORMWATER POLLUTION PREVENTION PLAN

TEMPORARY SEEDING - COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET	40			■	■	■	■	■	■				
RYE, GRAIN	56	■	■	■						■	■	■	■
RYEGRASS	50	■	■	■	■					■	■	■	■
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET JAPANESE MILLET	40 40			■	■	■	■	■	■				
RYE, GRAIN OATS	56 75	■	■	■						■	■	■	■
RYEGRASS	50	■	■	■	■					■	■	■	■

PERMANENT SEEDING - COASTAL

SPECIES	LBS/AC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SANDY, DROUGHTY SITES													
BROWNTOP MILLET BAHIAGRASS	10 40			■	■	■	■	■	■				
BROWNTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 30 40			■	■	■	■	■	■				
BROWNTOP MILLET ATLANTIC COASTAL PANICGRASS	10 15 PLS			■	■	■	■						
BROWNTOP MILLET SWITCHGRASS (ALAMO) LITTLE BLUESTEM SERICEA LESPEDEZA	10 8 PLS 4 20			■	■	■	■						
BROWNTOP MILLET WEEPING LOVEGRASS	10 8			■	■	■	■						
WELL DRAINED, CLAYEY/LOAMEY SITES													
BROWNTOP MILLET BAHIAGRASS	10 40			■	■	■	■	■	■				
RYE, GRAIN BAHIAGRASS CLOVER, CRIMSON (ANNUAL)	10 40 5									■	■	■	
BROWNTOP MILLET BAHIAGRASS SERICEA LESPEDEZA	10 30 40			■	■	■	■	■	■				
BROWNTOP MILLET BERMUDA, COMMON SERICEA LESPEDEZA	10 10 40			■	■	■	■	■	■				
BROWNTOP MILLET BERMUDA, COMMON KOBE LESPEDEZA (ANNUAL)	10 12 10			■	■	■	■	■	■				
BROWNTOP MILLET BAHIAGRASS BERMUDA, COMMON SERICEA LESPEDEZA	10 20 6 40			■	■	■	■	■	■				
BROWNTOP MILLET SWITCHGRASS LITTLE BLUESTEM INDIANGRASS	10 8 PLS 3			■	■	■	■	■	■				

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
SILT FENCE	
CLEARING LIMITS	CL — CL
DIVERSION DIKE	DD
DIVERSION BERM	DB
TEMPORARY DIVERSION	TD
PERMANENT DIVERSION	PD
SUBSURFACE DRAIN	SSD
VEGETATED CHANNEL	
RIP RAP LINED CHANNEL	
ECB OR TRM LINED CHANNEL	
PAVED CHANNEL	PC
TREE PROTECTION	
SURFACE ROUGHENING	OR LG
TOP SOILING	
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
MULCHING	M

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
EROSION CONTROL BLANKET OR TURF REINFORCEMENT MAT	
FLEXIBLE GROWTH MATRIX	FGM
BONDED FIBER MATRIX	BFM
SODDING	SO
SLOPED SODDING	
STAKED SOD	
STAKED SOD AROUND INLET	OR
RIPRAP	
OUTLET PROTECTION - RIP RAP	
OUTLET PROTECTION - ECB OR TRM	
DUST CONTROL	DC
POLYACRYLAMIDE (PAM)	PAM
SEDIMENT BASIN	
SEDIMENT BASIN WITH SKIMMER	
SEDIMENT TRAP	
ROCK SEDIMENT DIKE	
SEDIMENT TUBE	

EROSION CONTROL LEGEND

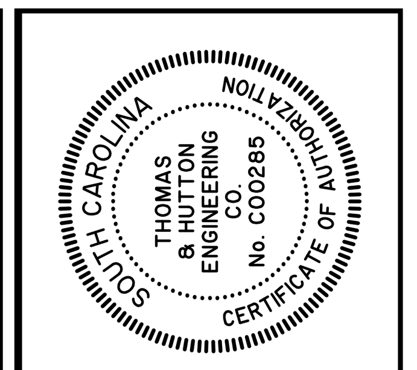
DESCRIPTION	PLAN SYMBOL
ROCK CHECK DAM	OR
POROUS BAFFLES	
STABILIZED CONSTRUCTION ENTRANCE	
CONCRETE WASHOUT	
STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	A
STORM DRAIN INLET PROTECTION - TYPE A SEDIMENT TUBE	A
STORM DRAIN INLET PROTECTION - TYPE B HARDWARE FABRIC AND STONE	B
STORM DRAIN INLET PROTECTION - TYPE C BLOCK AND GRAVEL	C
STORM DRAIN INLET PROTECTION - TYPE D RIGID INLET FILTER	D
STORM DRAIN INLET PROTECTION - TYPE E SURFACE COURSE CURB INLET FILTER	E
STORM DRAIN INLET PROTECTION - TYPE F INLET TUBE	F
STORM DRAIN INLET PROTECTION - TYPE G IMPERVIOUS AREA	G
STORM DRAIN INLET PROTECTION - CATCH BASIN INSERT	I
PIPE SLOPE DRAINS	
TEMPORARY STREAM CROSSING	
LEVEL SPREADER	

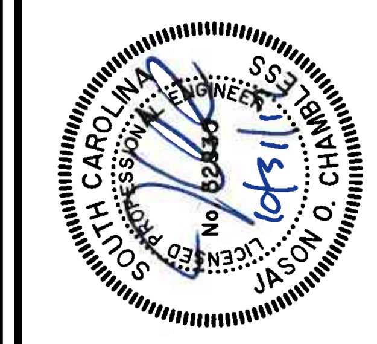
LIST OF ACRONYMS FOR SEDIMENT AND EROSION CONTROL

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AMD	ACRYLAMIDE POLYMER
BFM	BONDED FIBER MATRIX
BMP(S)	BEST MANAGEMENT PRACTICE(S)
CFS	CUBIC FEET PER SECOND
CMP	CORRUGATED METAL PIPE
DHEC	DEPARTMENT OF HEATH AND ENVIRONMENTAL CONTROL
ECB	EROSION CONTROL BLANKET
EPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPSC	EROSION PREVENTION AND SEDIMENTATION CONTROL
FDA	UNITED STATES FOOD AND DRUG ADMINISTRATION
FGM	FLEXIBLE GROWTH MATRIX
HDPE	HIGH DENSITY POLYETHYLENE
MS4	MUNICIPAL SEPARATE STORM SEWER SYSTEM
MSDS	MATERIAL SAFETY DATA SHEETS
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PAM	POLYACRYLAMIDE OR POLYMER
RCP	REINFORCED CONCRETE PIPE
SCS	SOIL CONSERVATION SERVICE
SWPPP	STORMWATER POLLUTION PREVENTION PROGRAM
TRM	TURF REINFORCEMENT MAT
VFS	VEGETATED FILTER STRIP

CONSTRUCTION SEQUENCE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
1 OBTAIN COPIES OF ALL PLAN APPROVALS AND OTHER APPLICABLE PERMITS.	CONTRACTOR TO HAVE ONSITE AT ALL TIMES DURING CONSTRUCTION.
2 FLAG THE WORK LIMITS AND BARRICADE TREES AND MARK BUFFER AREAS FOR PROTECTION.	HAVE LOCAL REGULATORY AGENCY INSPECT TREE BARRICADES.
3 HOLD PRE CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION.	REVIEW TREE PROTECTION (BARRICADE) WITH OWNER AND LOCAL REGULATORY AGENCY. TAKE PICTURES OF ALL PROTECTED TREES AND LOCATIONS WHERE SITE WORK TIES INTO EXISTING TO DOCUMENT PREDEVELOPMENT PROCEDURES.
4 INSTALL CONSTRUCTION ACCESS AND LAY DOWN AREAS	STABILIZE BARE AREAS IMMEDIATELY AND INSTALL CONSTRUCTION EXITS / ENTRANCES.
5 CONSTRUCT SEDIMENT TRAPS AND BARRIERS - BASIN TRAPS, SEDIMENT FENCES, AND OUTLET PROTECTION.	INSTALL PRINCIPAL BASINS AFTER CONSTRUCTION SITE IS ACCESSED. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING.
6 ESTABLISH RUNOFF CONTROL - DIVERSIONS, PERIMETER DIKES, WATER BARS, AND OUTLET PROTECTION.	INSTALL KEY PRACTICES AFTER PRINCIPAL SEDIMENT TRAPS AND BEFORE LAND GRADING. INSTALL ADDITIONAL RUNOFF-CONTROL MEASURES DURING GRADING.
7 LAND CLEARING AND GRADING-SITE PREPARATION CUTTING, FILLING AND GRADING, SEDIMENTATION TRAPS, BARRIERS, DIVERSIONS, DRAINS, SURFACE ROUGHENING.	BEGIN MAJOR CLEARING AND GRADING AFTER PRINCIPAL SEDIMENT AND KEY RUNOFF-CONTROL MEASURES ARE INSTALLED. CLEAR BORROW AND DISPOSAL AREAS ONLY AS NEEDED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES. MARK TREES AND BUFFER AREAS FOR PRESERVATION.
8 RUNOFF CONVEYANCE SYSTEM- INSTALL STORM DRAINS, STABILIZE BANKS, CHANNELS, INSTALL INLET AND OUTLET PROTECTION, SLOPE DRAINS.	WHERE NECESSARY, STABILIZE BANKS AS EARLY AS POSSIBLE. INSTALL PRINCIPAL RUNOFF CONVEYANCE SYSTEM WITH RUNOFF- CONTROL MEASURES. INSTALL REMAINDER OF SYSTEM AFTER GRADING.
9 INSTALL WASTEWATER COLLECTION, WATER DISTRIBUTION, AND STORM DRAINAGE SYSTEMS	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
10 SURFACE STABILIZATION-TEMPORARY AND PERMANENT SEEDING, MULCHING, SODDING, RIP RAP.	APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.
11 BUILDING CONSTRUCTION- BUILDINGS UTILITIES, ROADS, ETC.	INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROL PRACTICES AS WORK TAKES PLACE.
12 LANDSCAPING AND FINAL STABILIZATION - TOPSOILING, TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING, RIP RAP.	LAST CONSTRUCTION PHASE--STABILIZE ALL OPEN AREAS, INCLUDING BORROW AND SPOIL AREAS. REMOVE AND STABILIZE ALL TEMPORARY CONTROL MEASURES.





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Savannah, GA 31405 • 912.234.5300
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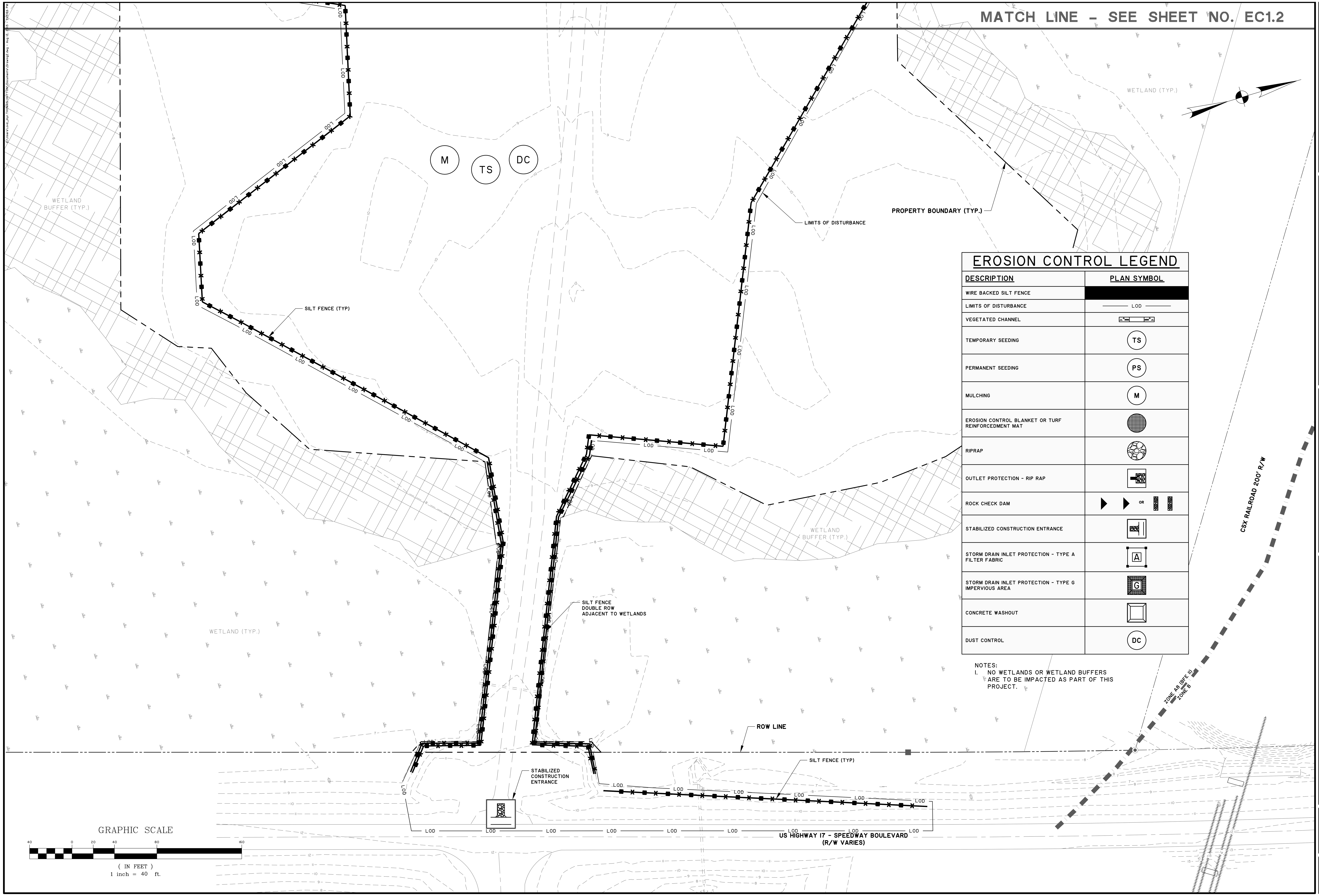
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SWPP - CHARTS

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	N/A

ECO.2



EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
WIRE BACKED SILT FENCE	
LIMITS OF DISTURBANCE	LOD
VEGETATED CHANNEL	
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
MULCHING	M
EROSION CONTROL BLANKET OR TURF REINFORCEMENT MAT	
RIPRAP	
OUTLET PROTECTION - RIP RAP	
ROCK CHECK DAM	OR
STABILIZED CONSTRUCTION ENTRANCE	
STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	A
STORM DRAIN INLET PROTECTION - TYPE G IMPERVIOUS AREA	G
CONCRETE WASHOUT	
DUST CONTROL	DC

NOTES:

1. NO WETLANDS OR WETLAND BUFFERS ARE TO BE IMPACTED AS PART OF THIS PROJECT.

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. JASON D. CHARLES

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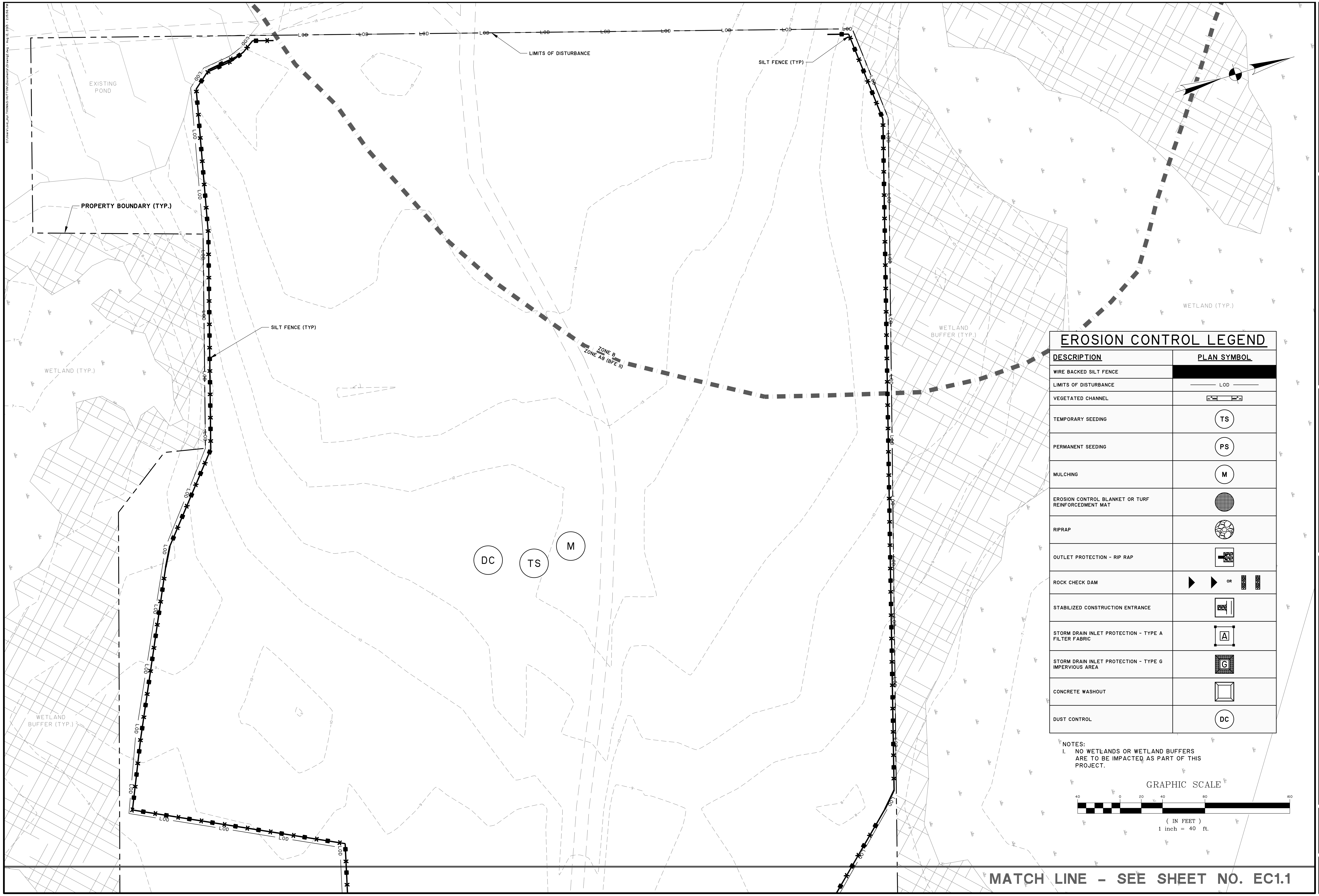
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SWPP - INITIAL PHASE

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

EC1.1



EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
WIRE BACKED SILT FENCE	
LIMITS OF DISTURBANCE	LOD
VEGETATED CHANNEL	
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
MULCHING	M
EROSION CONTROL BLANKET OR TURF REINFORCEDMENT MAT	
RIPRAP	
OUTLET PROTECTION - RIP RAP	
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STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	A
STORM DRAIN INLET PROTECTION - TYPE G IMPERVIOUS AREA	G
CONCRETE WASHOUT	
DUST CONTROL	DC

NOTES:
1. NO WETLANDS OR WETLAND BUFFERS ARE TO BE IMPACTED AS PART OF THIS PROJECT.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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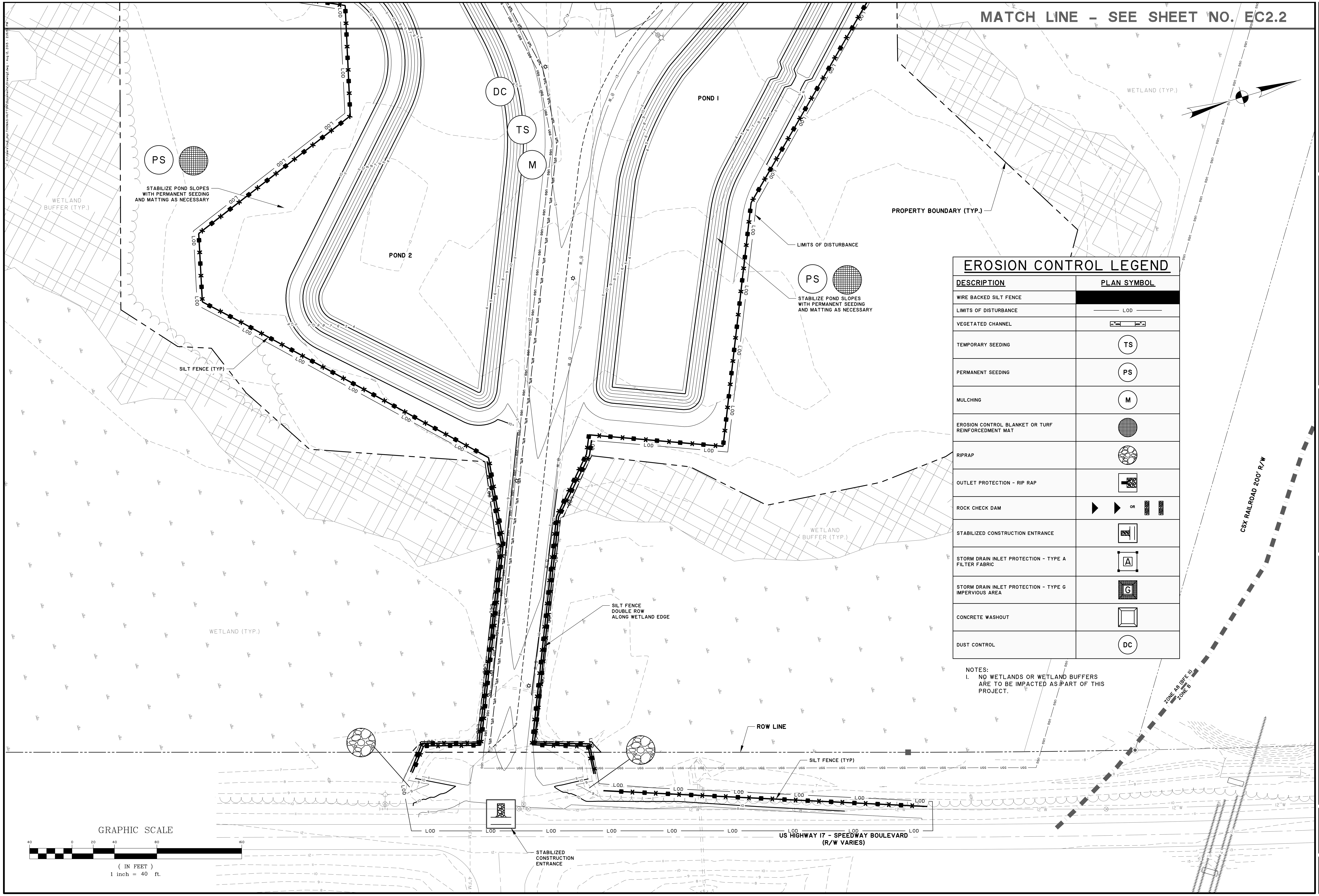
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

EC1.2



EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
WIRE BACKED SILT FENCE	
LIMITS OF DISTURBANCE	LOD
VEGETATED CHANNEL	
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
MULCHING	M
EROSION CONTROL BLANKET OR TURF REINFORCEMENT MAT	
RIPRAP	
OUTLET PROTECTION - RIP RAP	
ROCK CHECK DAM	OR
STABILIZED CONSTRUCTION ENTRANCE	
STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	A
STORM DRAIN INLET PROTECTION - TYPE G IMPERVIOUS AREA	G
CONCRETE WASHOUT	
DUST CONTROL	DC

NOTES:
1. NO WETLANDS OR WETLAND BUFFERS ARE TO BE IMPACTED AS PART OF THIS PROJECT.

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

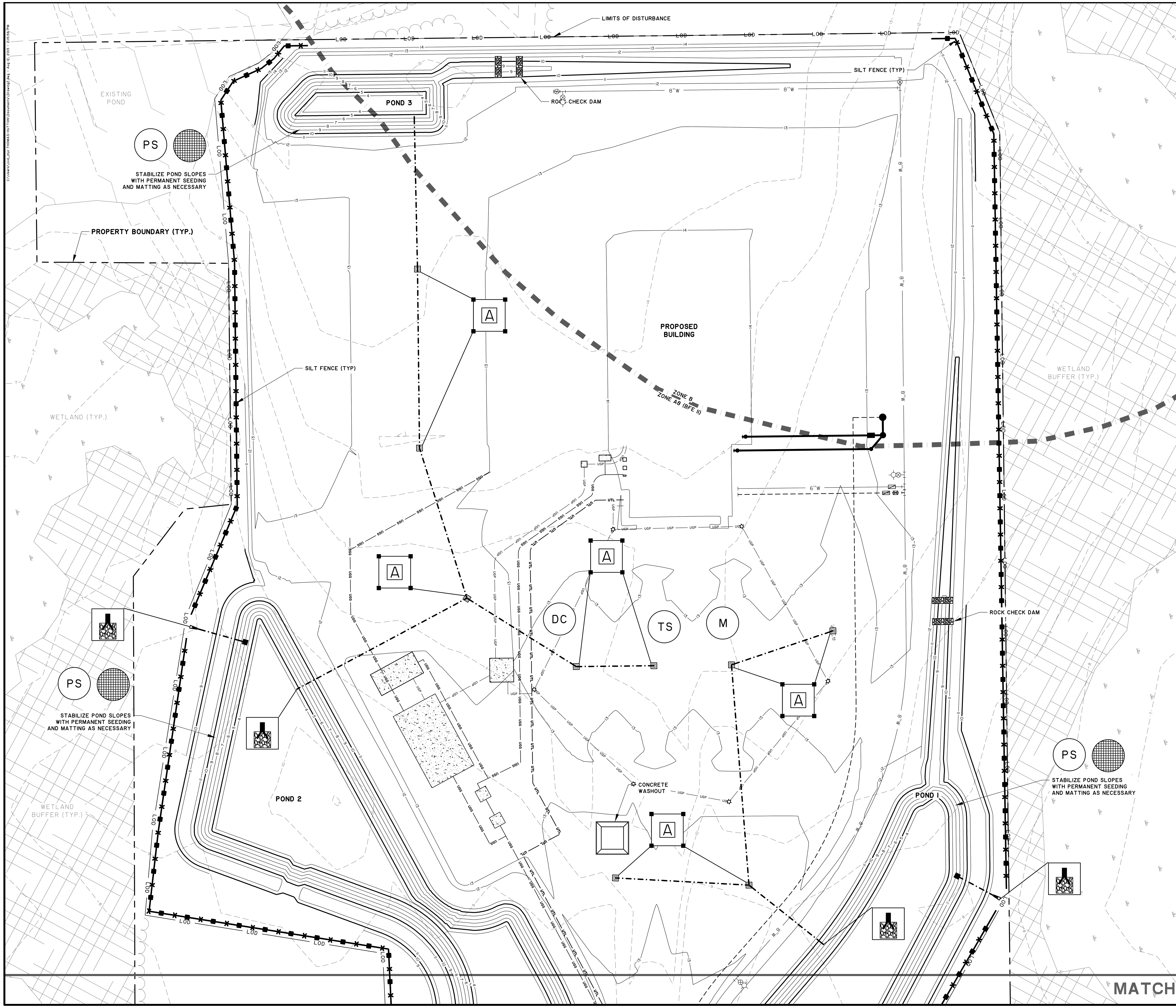
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SWPP - CONSTRUCTION PHASE

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

EC2.1



EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
WIRE BACKED SILT FENCE	
LIMITS OF DISTURBANCE	LOD
VEGETATED CHANNEL	
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
MULCHING	M
EROSION CONTROL BLANKET OR TURF REINFORCEDMENT MAT	
RIPRAP	
OUTLET PROTECTION - RIP RAP	
ROCK CHECK DAM	OR
STABILIZED CONSTRUCTION ENTRANCE	
STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	A
STORM DRAIN INLET PROTECTION - TYPE G IMPERVIOUS AREA	G
CONCRETE WASHOUT	
DUST CONTROL	DC

NOTES:
1. NO WETLANDS OR WETLAND BUFFERS ARE TO BE IMPACTED AS PART OF THIS PROJECT.

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

MATCH LINE - SEE SHEET NO. EC2.1

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO	REVISIONS	BY	DATE

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

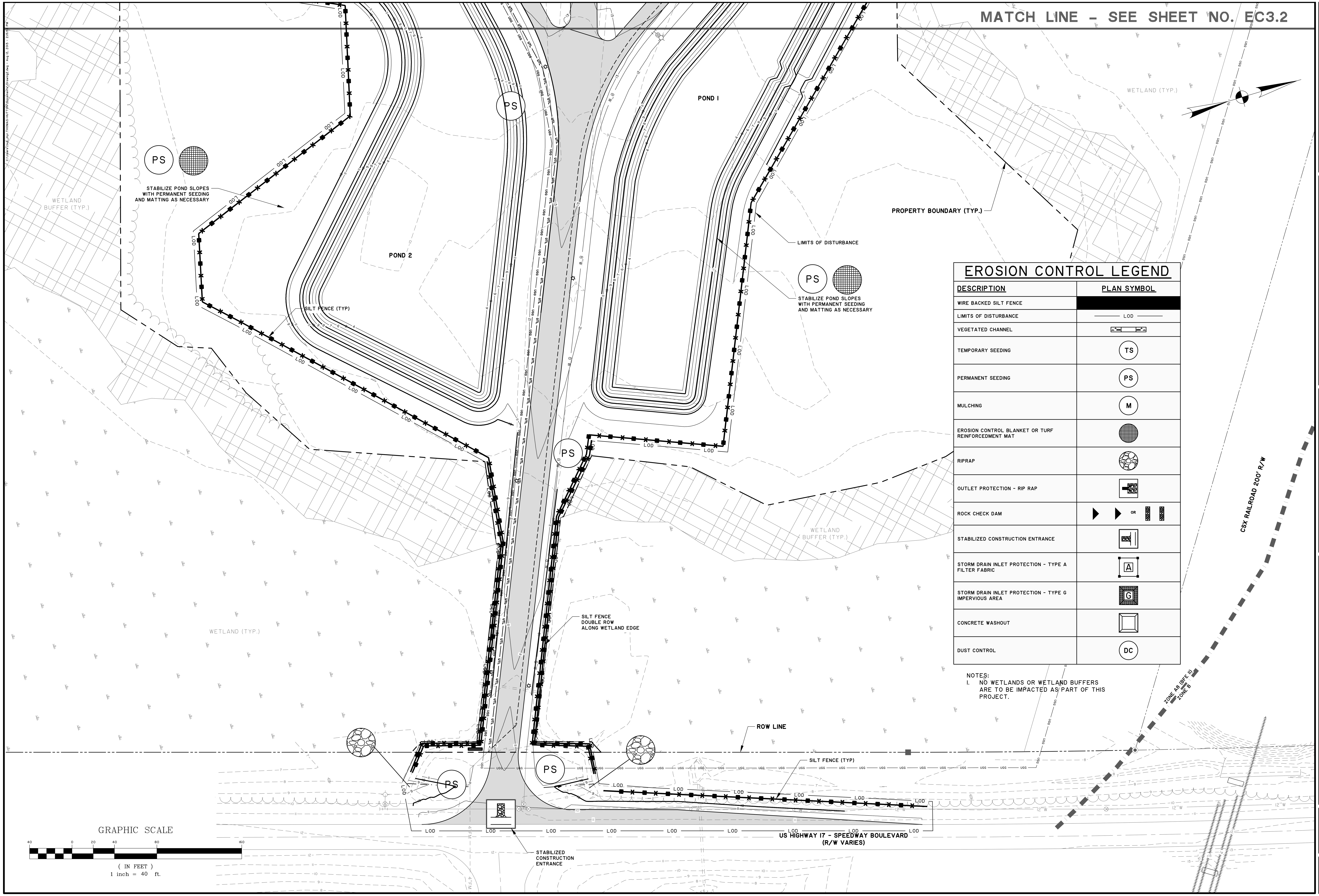
HARDEEVILLE HAULING FACILITY

SWPP - CONSTRUCTION PHASE

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

EC2.2

MATCH LINE - SEE SHEET NO. EC3.2



EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
WIRE BACKED SILT FENCE	[solid black bar]
LIMITS OF DISTURBANCE	—— LOD ——
VEGETATED CHANNEL	[channel symbol]
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
MULCHING	M
EROSION CONTROL BLANKET OR TURF REINFORCEMENT MAT	[hatched circle]
RIPRAP	[riprap circle]
OUTLET PROTECTION - RIP RAP	[outlet protection symbol]
ROCK CHECK DAM	[triangles] OR [bars]
STABILIZED CONSTRUCTION ENTRANCE	[entrance symbol]
STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	A
STORM DRAIN INLET PROTECTION - TYPE G IMPERVIOUS AREA	G
CONCRETE WASHOUT	[washout symbol]
DUST CONTROL	DC

NOTES:
1. NO WETLANDS OR WETLAND BUFFERS ARE TO BE IMPACTED AS PART OF THIS PROJECT.

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32830 JASON O. CHAMBLESS 10/31/17

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

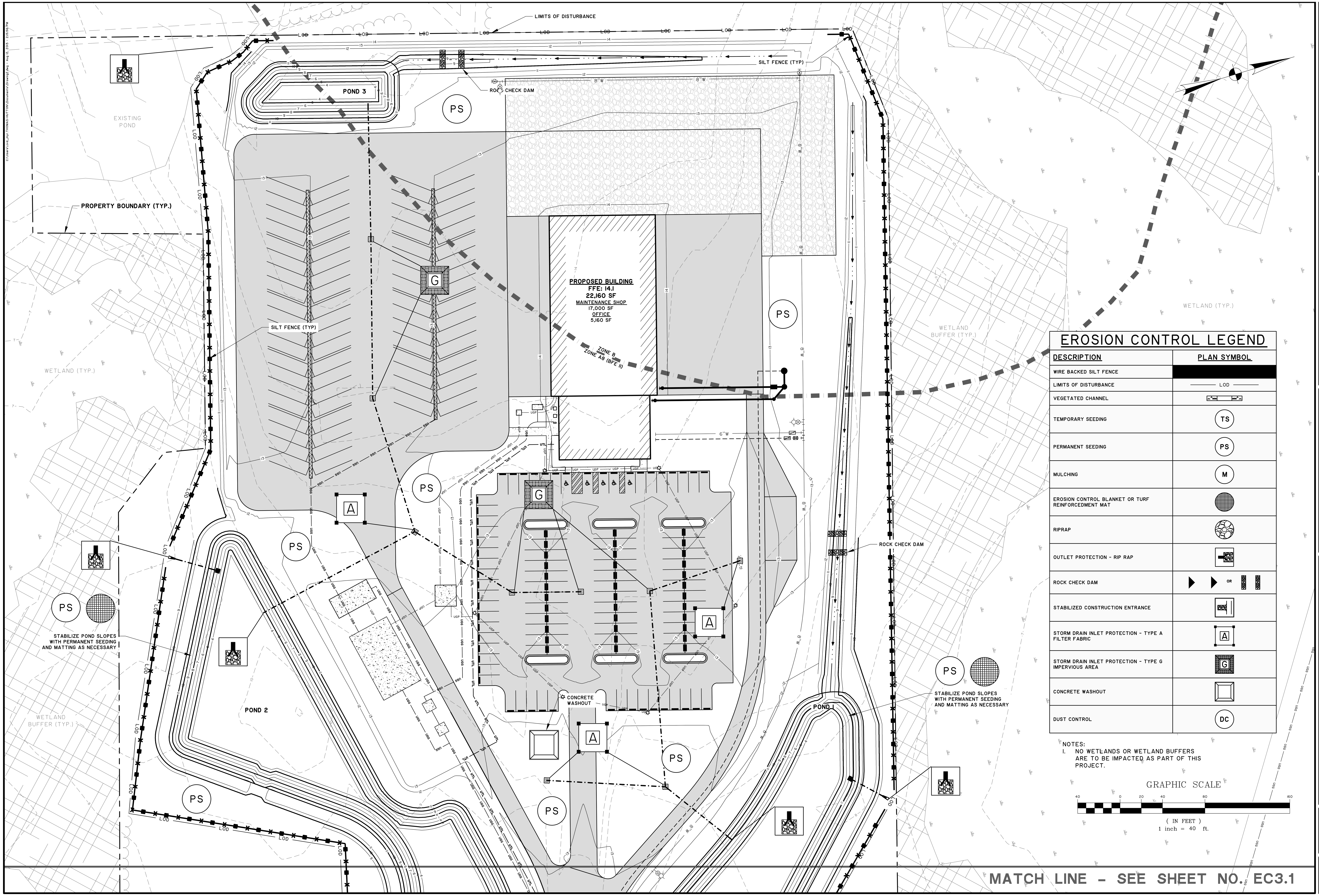
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SWPP - STABILIZATION PHASE

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

EC3.1



EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
WIRE BACKED SILT FENCE	
LIMITS OF DISTURBANCE	LOD
VEGETATED CHANNEL	
TEMPORARY SEEDING	TS
PERMANENT SEEDING	PS
MULCHING	M
EROSION CONTROL BLANKET OR TURF REINFORCEMENT MAT	
RIPRAP	
OUTLET PROTECTION - RIP RAP	
ROCK CHECK DAM	OR
STABILIZED CONSTRUCTION ENTRANCE	
STORM DRAIN INLET PROTECTION - TYPE A FILTER FABRIC	A
STORM DRAIN INLET PROTECTION - TYPE G IMPERVIOUS AREA	G
CONCRETE WASHOUT	
DUST CONTROL	DC

NOTES:
1. NO WETLANDS OR WETLAND BUFFERS ARE TO BE IMPACTED AS PART OF THIS PROJECT.

PERMIT SET - FOR REVIEW PURPOSES ONLY

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NO.	REVISIONS	BY	DATE

WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

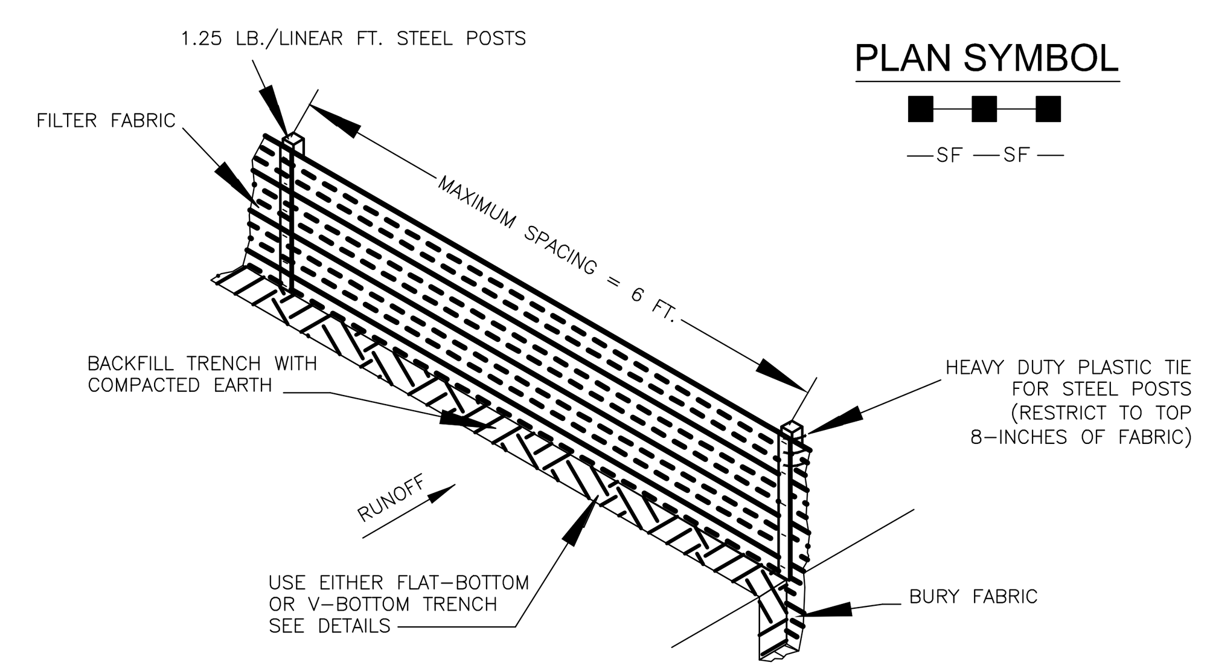
HARDEEVILLE HAULING FACILITY

SWPP - STABILIZATION PHASE

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

EC3.2

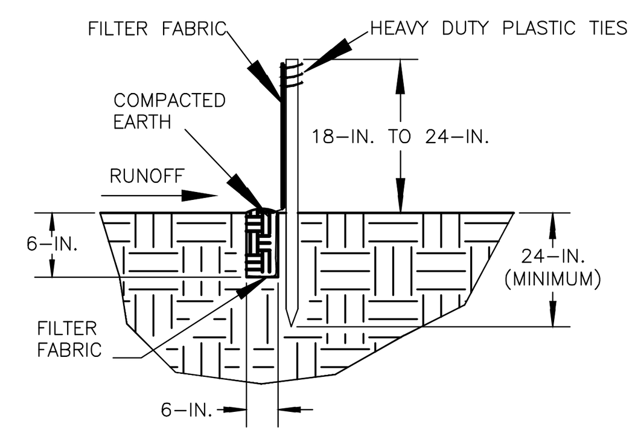
SILT FENCE INSTALLATION



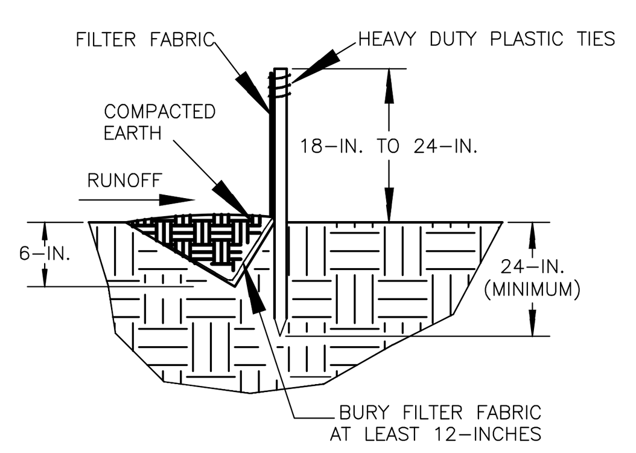
PLAN SYMBOL

—SF —SF —

FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL



SILT FENCE - GENERAL NOTES

1. Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
2. Maximum sheet or overland flow path length to the silt fence shall be 100-feet.
3. Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
4. Silt fence joints, when necessary, shall be completed by one of the following options:
   - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
   - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties; or,
   - Overlap entire width of each silt fence roll from one support post to the next support post.
5. Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
6. Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
7. Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

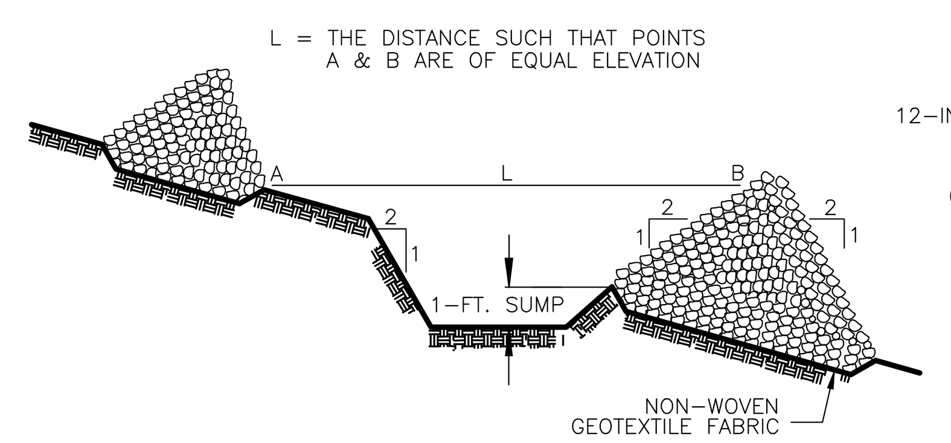
South Carolina Department of Health and Environmental Control

SILT FENCE

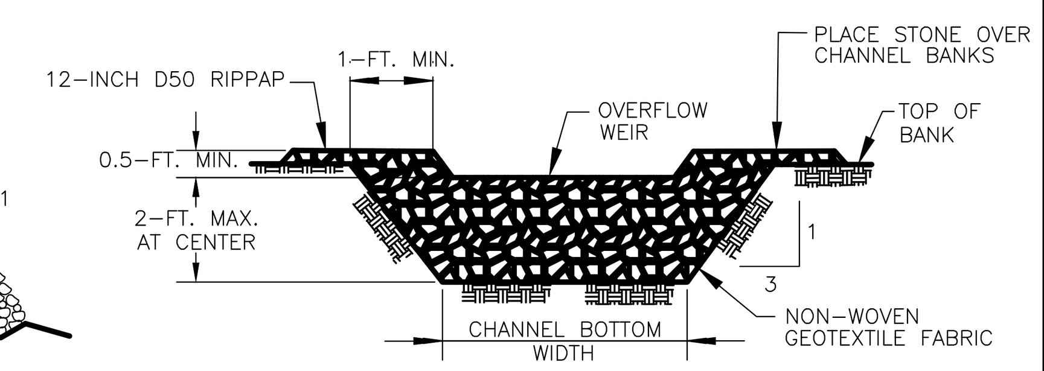
STANDARD DRAWING NO. **SC-03 Page 1 of 2**

NOT TO SCALE FEBRUARY 2014 DATE

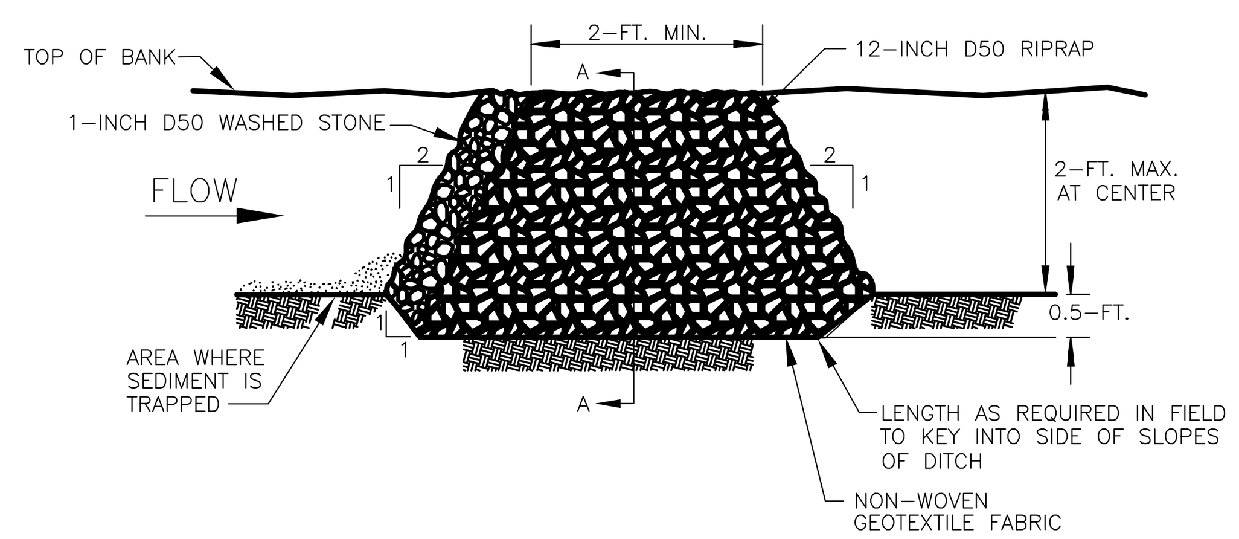
SPACING BETWEEN DITCH CHECK



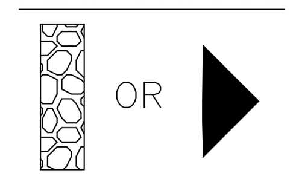
CROSS SECTION A-A THRU STONE DITCH CHECK



TYPICAL DITCH CHECK SECTION



PLAN SYMBOL

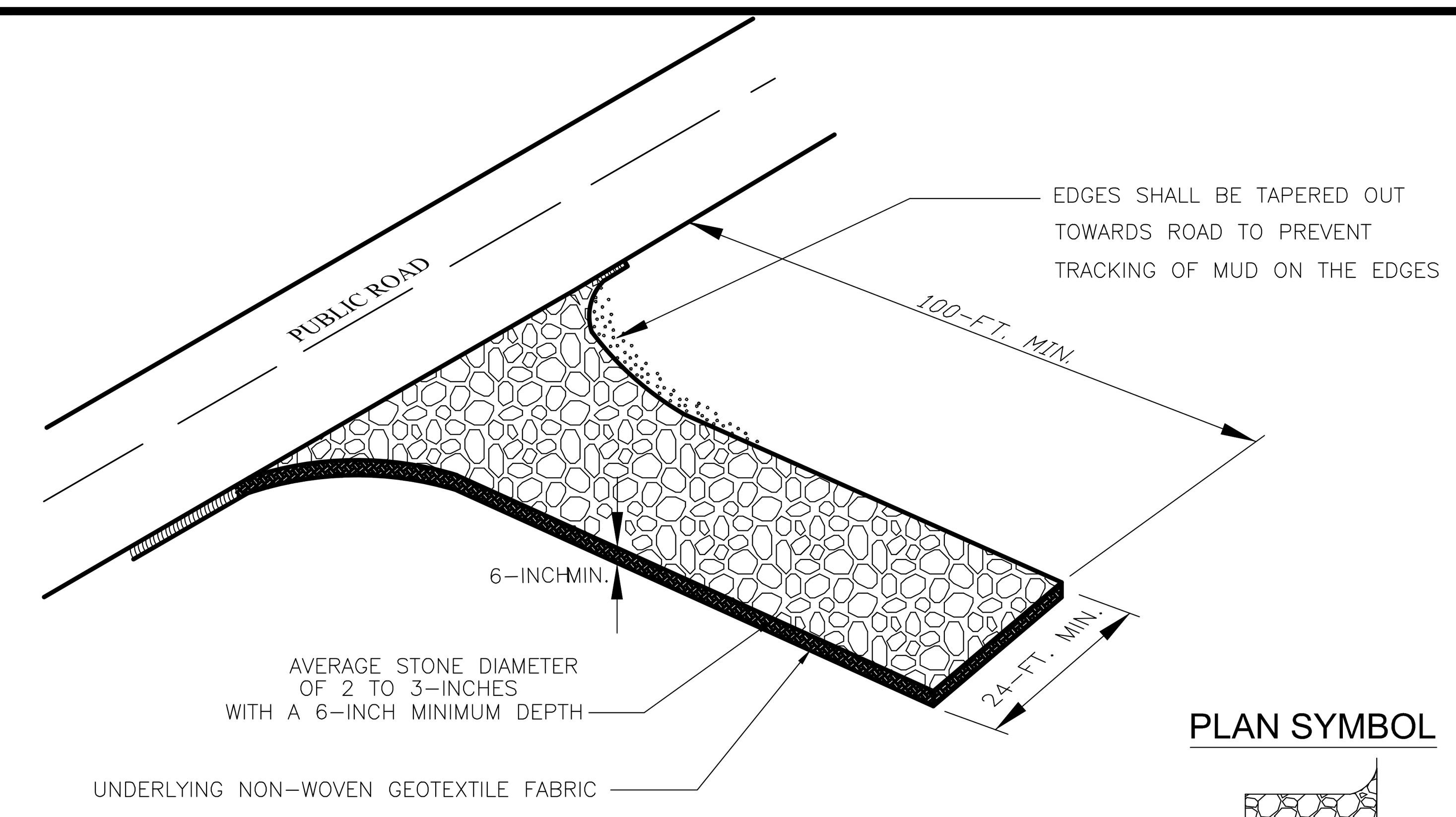


South Carolina Department of Health and Environmental Control

ROCK DITCH CHECK

STANDARD DRAWING NO. **SC-04 PAGE I of 2**

NOT TO SCALE FEBRUARY 2014 DATE



PLAN SYMBOL

SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2-3 INCHES

South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. **SC-06 PAGE I of 2**

NOT TO SCALE FEBRUARY 2014 DATE

SILT FENCE - POST REQUIREMENTS

1. Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics.
   - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
   - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
   - Weigh 1.25 pounds per foot (± 8%)
2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17-square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
4. Install posts to a minimum of 24-inches. A minimum height of 1- to 2-inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
5. Post spacing shall be at a maximum of 6-feet on center.

SILT FENCE - FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
   - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
   - Free of any treatment or coating which might adversely alter its physical properties after installation;
   - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
   - Have a minimum width of 36-inches.
2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24-inches above the ground.

SILT FENCE - INSPECTION & MAINTENANCE

1. The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence, as necessary.
7. Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
8. Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

South Carolina Department of Health and Environmental Control

SILT FENCE

STANDARD DRAWING NO. **SC-03 PAGE 2 of 2**

GENERAL NOTES FEBRUARY 2014 DATE

ROCK DITCH CHECK - GENERAL NOTES

1. Rock Ditch Checks should not be placed in Waters of the State or USGS blue-line streams (unless approved by Federal Authorities).
2. Rock Ditch Checks should be installed in steeply sloped channels where adequate vegetation cannot be established. This BMP measure should only be used in small open channels.
3. A non-woven geotextile fabric shall be installed over the soil surface where the rock ditch check is to be placed.
4. The body of the rock ditch check shall be composed of 12-inch D50 Riprap. The upstream face may be composed of 1-inch D50 washed stone.
5. Rock Ditch Checks should not exceed a height of 2-feet at the centerline of the channel.
6. Rock Ditch Checks should have a minimum top flow length of 2-feet.
7. Riprap should be placed over channel banks to prevent water from cutting around the ditch check.
8. The riprap should be placed by hand or mechanical placement (no dumping of rock to form dam) to achieve complete coverage of the channel. Doing so will also ensure that the center of the check is lower than the edges.
9. The maximum spacing between the dams should be such that the toe of the upstream check is at the same elevation as the top of the downstream check.

ROCK DITCH CHECK - INSPECTION & MAINTENANCE

1. The key to functional rock ditch check is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of rock ditch checks shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations in front of the rock ditch check is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the rock ditch check.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Inspect Rock Ditch Checks' edges for erosion and evidence of runoff bypassing the installed check. If evident repair promptly as necessary to prevent erosion and bypassing.
7. In the case of grass-lined ditches, channels, and swales, rock ditch checks should be removed when the grass has matured sufficiently to protect the ditch or swale unless the slope of the swale is greater than 4%.
8. After construction is completed and final stabilization is reached, the entirety of the rock ditch check should be removed if vegetation will be used for permanent erosion control measures. The area beneath the removed rock ditch check must be addressed with permanent stabilization measures.

South Carolina Department of Health and Environmental Control

ROCK DITCH CHECK

STANDARD DRAWING NO. **SC-04 PAGE 2 of 2**

GENERAL NOTES FEBRUARY 2014 DATE

CONSTRUCTION ENTRANCE - GENERAL NOTES

1. Stabilized construction entrances should be used at all points where traffic will egress/ingress a construction site onto a public road or any impervious surfaces, such as parking lots.
2. Install a non-woven geotextile fabric prior to placing any stone.
3. Install a culvert pipe across the entrance when needed to provide positive drainage.
4. The entrance shall consist of 2-inch to 3-inch D50 stone placed at a minimum depth of 6-inches.
5. Minimum dimensions of the entrance shall be 24-feet wide by 100-feet long, and may be modified as necessary to accommodate site constraints.
6. The edges of the entrance shall be tapered out towards the road to prevent tracking at the edge of the entrance.
7. Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
8. Limestone may not be used for the stone pad.

CONSTR. ENTRANCE - INSPECTION & MAINTENANCE

1. The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.
4. Reshape the stone pad as necessary for drainage and runoff control.
5. Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off-site by vehicles. Frequent washing will extend the useful life of stone pad.
6. Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.
7. During maintenance activities, any broken pavement should be repaired immediately.
8. Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless area will be converted to an impervious surface to serve post-construction.

South Carolina Department of Health and Environmental Control

CONSTRUCTION ENTRANCE

STANDARD DRAWING NO. **SC-06 PAGE 2 of 2**

GENERAL NOTES FEBRUARY 2014 DATE

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 52836 JASON O. CHAMBLESS

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

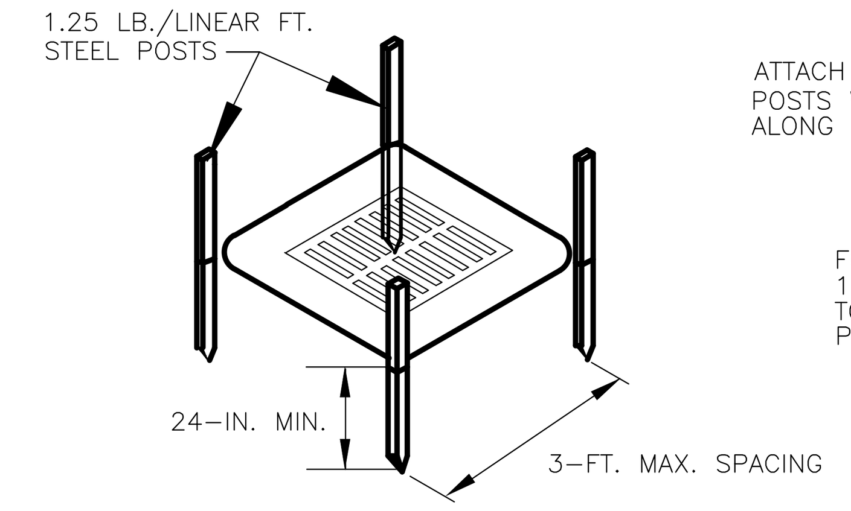
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

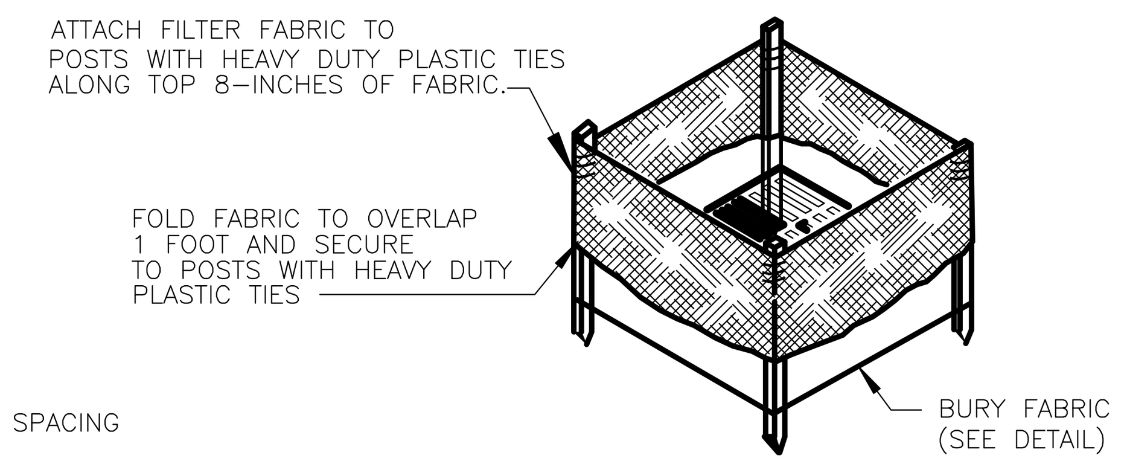
SWPP - DETAILS

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	N/A

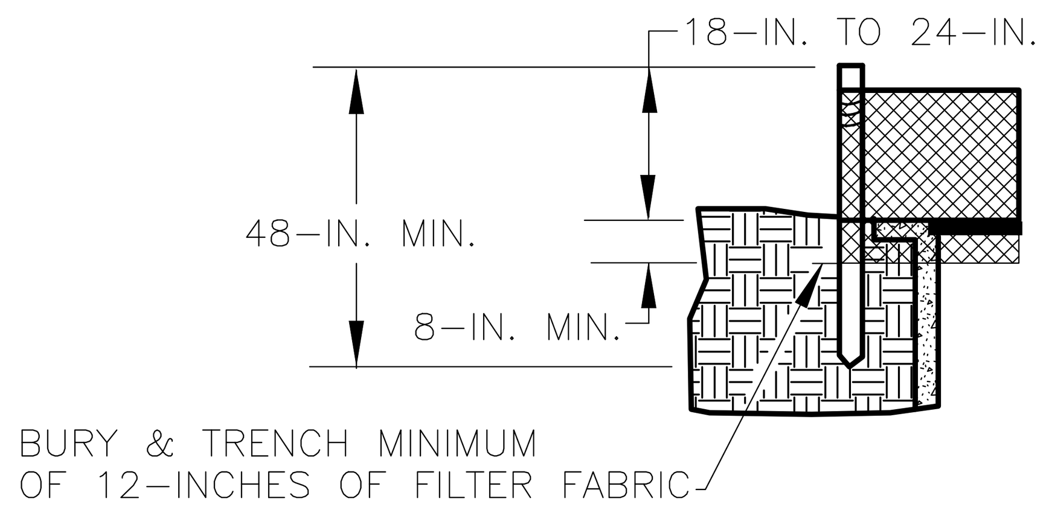
EC4.1



POST INSTALLATION DETAIL

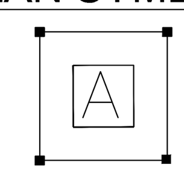


FILTER FABRIC INSTALLATION DETAIL



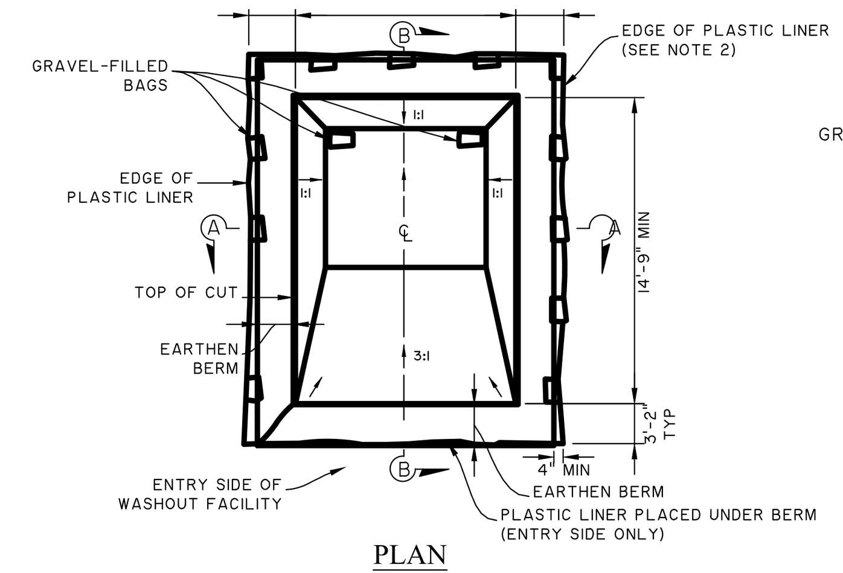
FILTER FABRIC BURIAL DETAIL

PLAN SYMBOL



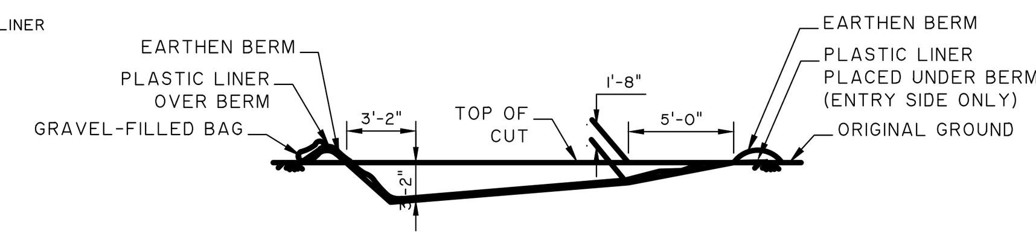
South Carolina Department of Health and Environmental Control
Type A **FILTER FABIC INLET PROTECTION**
STANDARD DRAWING NO. **SC-07 PAGE 1 of 2**
NOT TO SCALE FEBRUARY 2014 DATE

EXCAVATED PIT CONCRETE WASHOUT



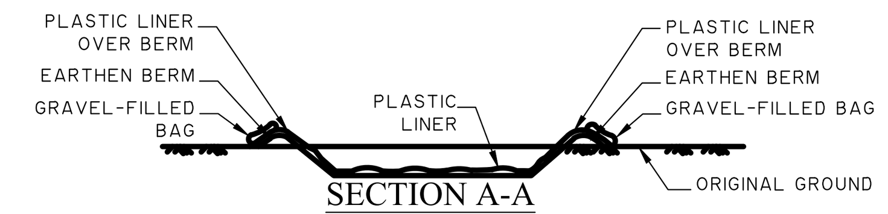
PLAN

TYPE "EXCAVATED PIT"



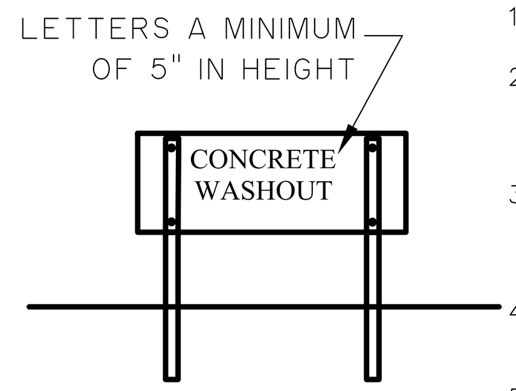
SECTION B-B

NOT TO SCALE



SECTION A-A

NOT TO SCALE



CONCRETE WASHOUT SIGN DETAIL

NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"X24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

South Carolina Department of Health and Environmental Control
CONCRETE WASHOUT **EXCAVATED PIT**
STANDARD DRAWING NO. **RC-08 PAGE 1 of 1**
NOT TO SCALE FEBRUARY 2014 DATE

TYPE A - FILTER FABRIC REQUIREMENTS

1. Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
- Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
- Free of any treatment or coating which might adversely alter its physical properties after installation;
- Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
- Have a minimum width of 36–inches.

2. Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
3. 12–inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
4. Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
5. Filter Fabric shall be installed at a minimum of 24–inches above the ground.

TYPE A - POST REQUIREMENTS

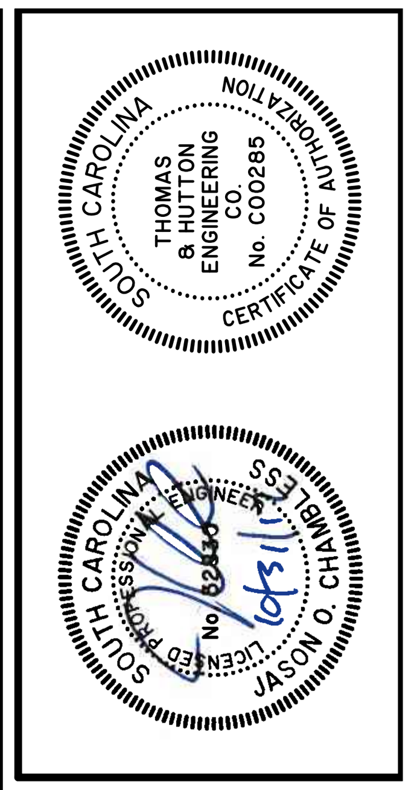
1. Silt Fence posts must be 48–inch long steel posts that meet, at a minimum, the following physical characteristics.
- Composed of a high strength steel with a minimum yield strength of 50,000 psi.
- Include a standard "T" section with a nominal face width of 1.38–inches and a nominal "T" length of 1.48–inches.
- Weigh 1.25 pounds per foot (± 8%)

2. Posts shall be equipped with projections to aid in fastening of filter fabric.
3. Install posts to a minimum of 24–inches. A minimum height of 1– to 2– inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
4. Post spacing shall be at a maximum of 3–feet on center.

TYPE A - INSPECTION & MAINTENANCE

1. The key to functional inlet protection is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of inlet protection shall be conducted once every calendar week and, as recommended, within 24–hours after each rainfall even that produces 1/2–inch or more of precipitation.
3. Attention to sediment accumulations along the filter fabric is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the filter fabric. When a sump is installed in front of the fabric, sediment should be removed when it fills approximately 1/3 the depth of the sump.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Check for areas where stormwater runoff has eroded a channel beneath the filter fabric, or where the fabric has sagged or collapsed due to runoff overtopping the inlet protection.
7. Check for tears within the filter fabric, areas where fabric has begun to decompose, and for any other circumstance that may render the inlet protection ineffective. Removed damaged fabric and reinstall new filter fabric immediately.
8. Inlet protection structures should be removed after all the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet structure crest. Stabilize all bare areas immediately.

South Carolina Department of Health and Environmental Control
Type A **FILTER FABIC INLET PROTECTION**
STANDARD DRAWING NO. **SC-07 PAGE 2 of 2**
GENERAL NOTES FEBRUARY 2014 DATE



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NO	REVISIONS	BY	DATE

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Savannah, GA 31405 • 912.234.5300
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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SWPP - DETAILS

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	N/A

EC4.2

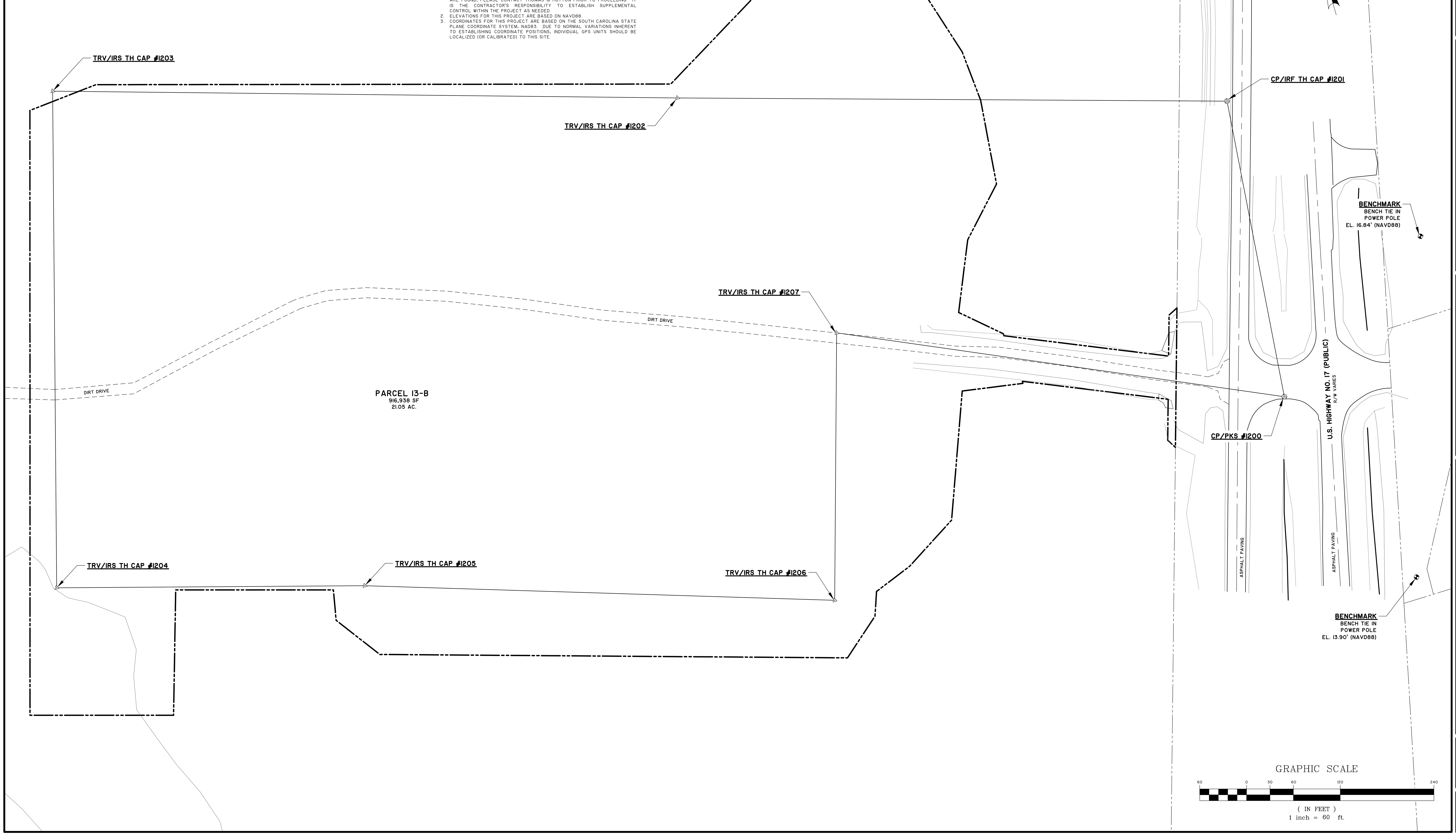
Point	Northing	Easting	Elevation	Description
1200	133721.290	1977126.553	12.76	CP/PKS
1201	134105.303	1977160.310	10.52	CP/IRF TH CAP
1202	134303.322	1976484.769		TRV/IRS TH CAP
1203	134532.277	1975717.819		TRV/IRS TH CAP
1204	133919.537	1975547.444		TRV/IRS TH CAP
1205	133813.359	1975927.554		TRV/IRS TH CAP
1206	133629.451	1976501.040		TRV/IRS TH CAP
1207	133957.985	1976597.828		TRV/IRS TH CAP

LEGEND

- BENCHMARK (VERTICAL ONLY)
- HORIZONTAL CONTROL POINT
- COMBINED-HORIZONTAL AND VERTICAL CONTROL

NOTES

1. HORIZONTAL AND VERTICAL CONTROL SHOWN ON THIS SHEET SHOULD BE USED FOR ALL LAYOUT AND RECORD DATA FOR THIS PROJECT. IF DISCREPANCIES ARE FOUND, PLEASE CONTACT THOMAS & HUTTON PRIOR TO PROCEEDING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ESTABLISH SUPPLEMENTAL CONTROL WITHIN THE PROJECT AS NEEDED.
2. ELEVATIONS FOR THIS PROJECT ARE BASED ON NAVD88.
3. COORDINATES FOR THIS PROJECT ARE BASED ON THE SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM, NAD83. DUE TO NORMAL VARIATIONS INHERENT TO ESTABLISHING COORDINATE POSITIONS, INDIVIDUAL GPS UNITS SHOULD BE LOCALIZED (OR CALIBRATED) TO THIS SITE.



SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER JASON O. CHAMBLESS

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.

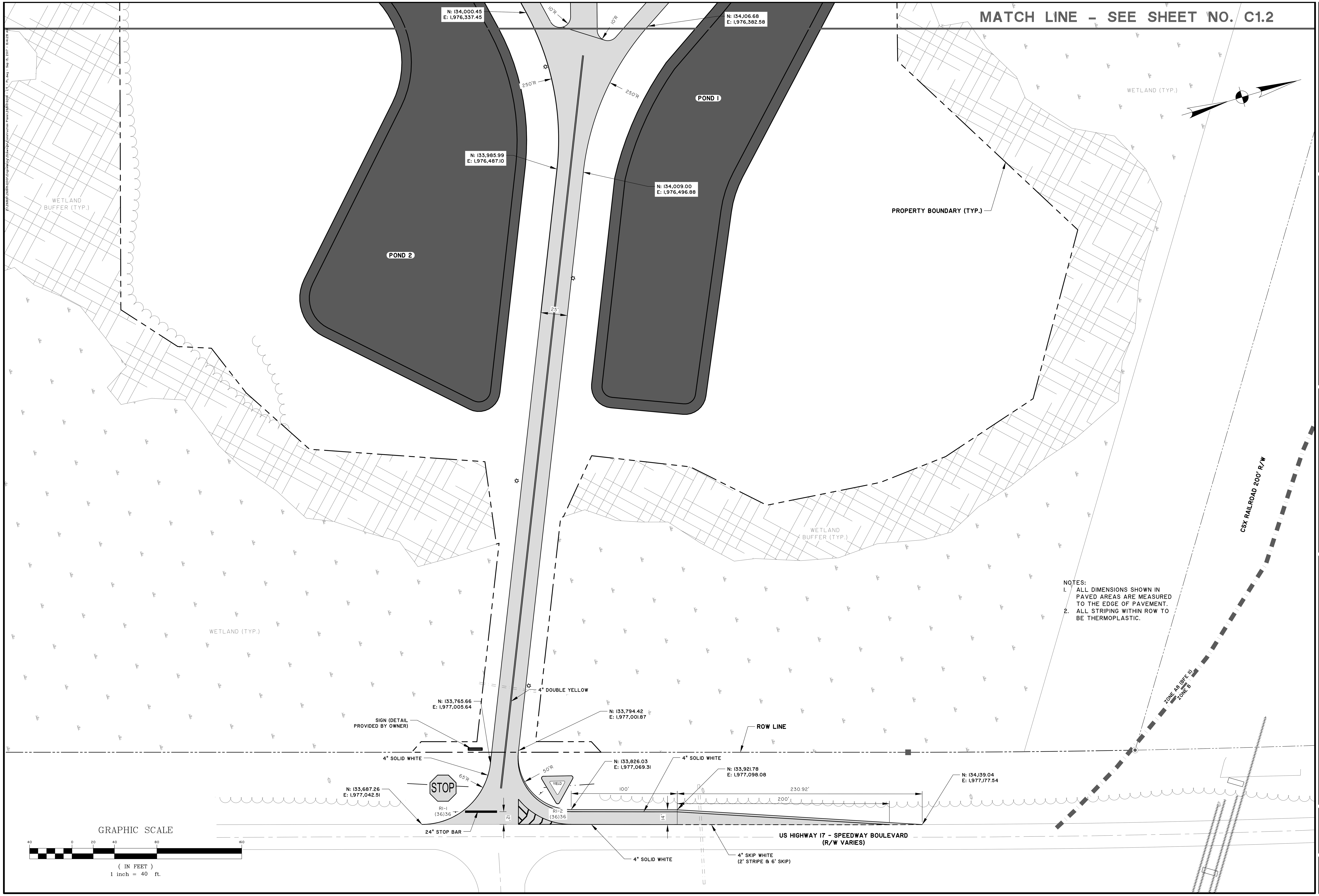
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SURVEY CONTROL

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 60'

V0.1



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NO	REVISIONS	BY	DATE

WASTE MANAGEMENT OF SOUTH CAROLINA, INC.

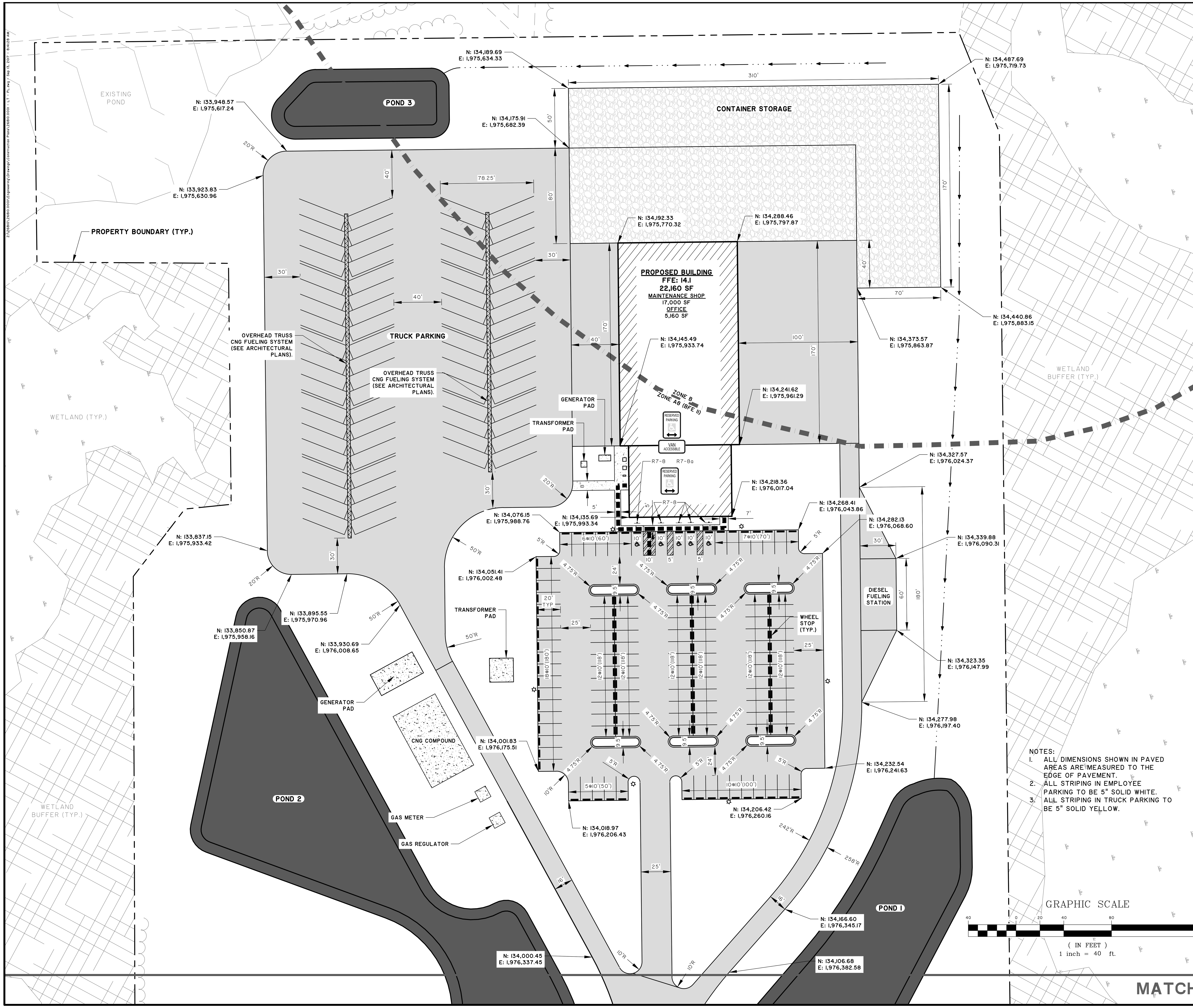
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SITE LAYOUT, STRIPING, AND SIGNAGE

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

C1.1



NOTES:
1. ALL DIMENSIONS SHOWN IN PAVED AREAS ARE MEASURED TO THE EDGE OF PAVEMENT.
2. ALL STRIPING IN EMPLOYEE PARKING TO BE 5" SOLID WHITE.
3. ALL STRIPING IN TRUCK PARKING TO BE 5" SOLID YELLOW.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

ACCESSIBILITY NOTES:

1. ACCESSIBLE ROUTE - EXTERIOR:

MINIMUM CLEAR WIDTH IS 3'. IF ACCESSIBLE ROUTE HAS LESS THAN 5' CLEAR WIDTH, THEN PASSING SPACES AT LEAST 5'X5' SHALL BE LOCATED EVERY 200' OR LESS (INTERSECTING SIDEWALKS MEET THIS REQUIREMENT). LONGITUDINAL (RUNNING) SLOPE MAY NOT EXCEED 5% UNLESS RAMP IS INSTALLED (RAMPS MAY NOT EXCEED 8.33%). CROSS SLOPE MAY NOT EXCEED 2%. GAPS IN ROUTE MAY NOT EXCEED 1/2" IN WIDTH.

2. FINISHED SURFACE HEIGHT DIFFERENCE REQUIREMENTS:

A. 0 TO 1/4" : NO REQUIREMENTS
B. 1/4" TO 1/2" : BEVEL WITH 1:2 SLOPE
C. LARGER THAN 1/2" : CONFORM TO REQUIREMENTS FOR RAMP

3. RAMPS:

- MAX RAMP SLOPE 8.33% (1:12).
- RAMPS STEEPER THAN 8.33% ARE NOT ACCEPTABLE.
- MAX RISE FOR ANY RAMP RUN IS 30" (AT 8.33% SLOPE, MAXIMUM RUN OF RAMP IS 30').
- MAX CROSS SLOPE OF RAMP 2% (1:50)

A. LANDINGS:

- RAMPS SHALL HAVE LEVEL LANDINGS AT BOTTOM AND TOP OF EACH RAMP.
- LANDING SHALL BE AT LEAST AS WIDE AS RAMP LEADING TO IT.
- LANDING LENGTH SHALL BE MINIMUM 5' CLEAR.
- IF RAMPS CHANGE DIRECTION AT LANDING, MINIMUM LANDING SIZE SHALL BE 5'X5'.
- ALL LANDINGS ARE TO BE NO MORE THAN 2% SLOPE IN ANY DIRECTION.

B. HANDRAILS:

- HANDRAILS REQUIRED ON BOTH SIDES (MIN. 36" CLEAR BETWEEN HANDRAILS) WHEN RAMP RISE IS GREATER THAN 6".
- PROVIDE MINIMUM 12" LONG HANDRAIL EXTENSIONS AT TOP AND BOTTOM LANDINGS.
- PROVIDE MINIMUM 2" HIGH EDGE PROTECTION OR RAIL WITH LESS THAN 4" CLEAR TO RAMP IF RAMP HAS DROP-OFFS.
- ROUTES BETWEEN BUILDINGS WITH ONLY DWELLING UNITS DO NOT HAVE TO HAVE HANDRAILS.
- STAIRS NOT ALLOWED AS PART OF ACCESSIBLE ROUTE BUT IF ADJACENT TO ROUTE OR PART OF TENANT SPACE MUST MEET REQUIREMENTS FOR STAIR RAILS.

4. CURB RAMPS:

- MAX SLOPE OF CURB RAMP 8.33%.
- MAX SLOPE OF SIDE FLARES 10%.
- MAX SLOPE OF ADJOINING GUTTERS, ROAD SURFACE, OR ACCESSIBLE ROUTE 5%.
- MIN WIDTH 36" (NOT INCLUDING SIDE FLARES).
- DETECTABLE WARNING IS REQUIRED ON CURB RAMPS IN PUBLIC RIGHTS OF WAY, AND SHALL BE 24" MINIMUM IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. DETECTABLE WARNINGS SHALL BE LOCATED SO THE EDGE NEAREST THE CURB LINE IS 6" TO 8" FROM THE CURB LINE.

5. PAVEMENT MARKINGS:

AS REQUIRED BY LOCAL JURISDICTIONAL AUTHORITY (RECOMMENDED CROSSWALK MARKING TO DESIGNATE ACCESSIBLE PEDESTRIAN ROUTE)

6. PARKING SPACES

- MINIMUM 8' WIDE ACCESSIBLE PARKING SPACE
- MINIMUM 5' WIDE ACCESS AISLE AT STANDARD SPACES
- MINIMUM 8' WIDE ACCESS AISLE AT VAN ACCESSIBLE SPACES
- MAXIMUM 2% (1:50) SLOPE IN ANY DIRECTION

7. SIGNAGE

ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED BY A SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. VAN ACCESSIBLE SPACES SHALL HAVE AN ADDITIONAL SIGN "VAN-ACCESSIBLE" MOUNTED BELOW THE SYMBOL. SUCH SIGNS SHALL BE LOCATED SO THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE (60" ABOVE GRADE UNLESS OTHER HEIGHT REQUIRED BY LOCAL JURISDICTION).

8. ACCESSIBLE ROUTES

MUST COMPLY WITH ADA, THE FAIR HOUSING ACT AND ICC/ANSI A117.1-2003.

LEGEND

▬ ▬ ACCESSIBLE ROUTE

MATCH LINE - SEE SHEET NO. C1.1

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32836 JASON O. CHAMBLESS 10/31/17

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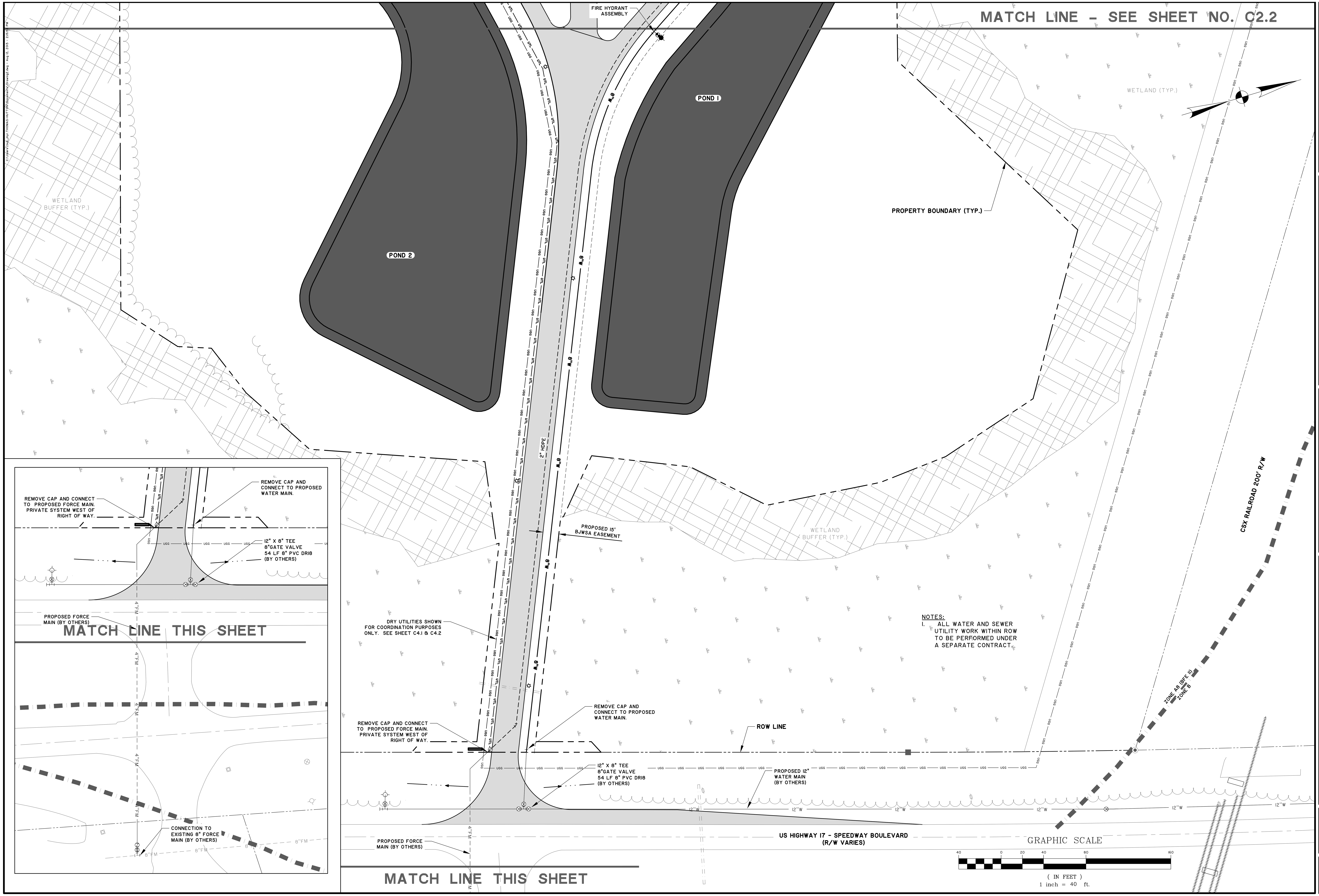
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SITE LAYOUT, STRIPING, AND SIGNAGE

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

C1.2


MATCH LINE - SEE SHEET NO. C2.2
FIRE HYDRANT ASSEMBLY
POND 1
POND 2
WETLAND (TYP.)
WETLAND BUFFER (TYP.)
PROPERTY BOUNDARY (TYP.)
2" HDPE
PROPOSED 15' BJWSA EASEMENT
CSX RAILROAD 200' R/W
DRY UTILITIES SHOWN FOR COORDINATION PURPOSES ONLY. SEE SHEET C4.1 & C4.2
NOTES:
1. ALL WATER AND SEWER UTILITY WORK WITHIN ROW TO BE PERFORMED UNDER A SEPARATE CONTRACT.
REMOVE CAP AND CONNECT TO PROPOSED WATER MAIN.
REMOVE CAP AND CONNECT TO PROPOSED FORCE MAIN. PRIVATE SYSTEM WEST OF RIGHT OF WAY.
ROW LINE
12" X 8" TEE
8" GATE VALVE
54 LF 8" PVC DR18 (BY OTHERS)
PROPOSED 12" WATER MAIN (BY OTHERS)
ZONE A6 (BFE 11)
ZONE B
US HIGHWAY 17 - SPEEDWAY BOULEVARD (R/W VARIES)
PROPOSED FORCE MAIN (BY OTHERS)
MATCH LINE THIS SHEET
CONNECTION TO EXISTING 8" FORCE MAIN (BY OTHERS)
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER JASON D. CHAMBLESS

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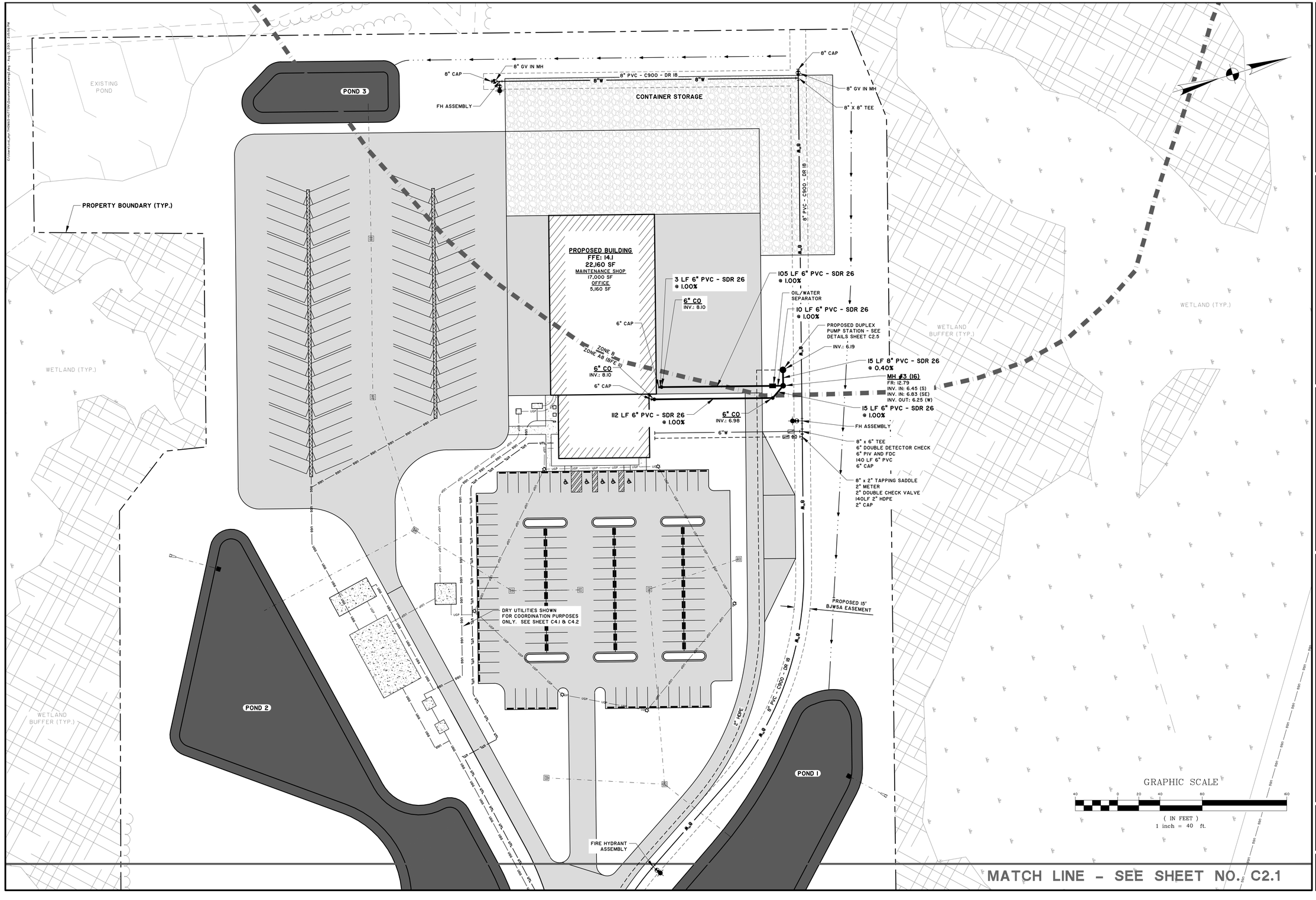
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

WATER AND SEWER PLAN

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

C2.1



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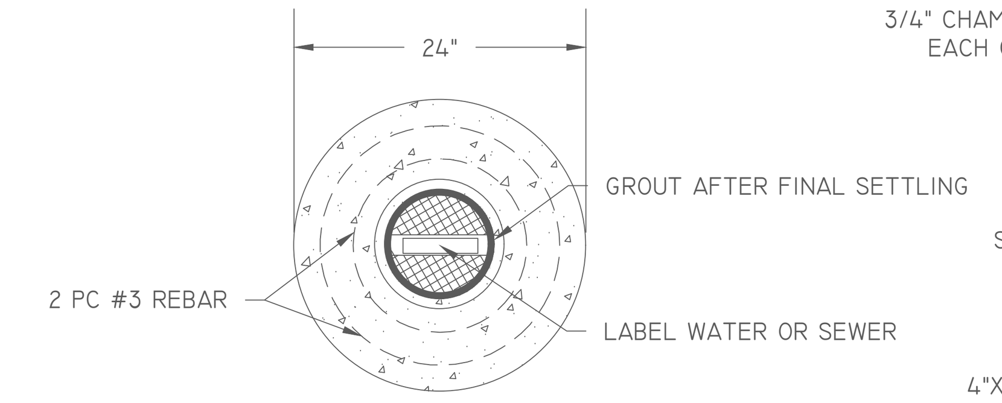
HARDEEVILLE HAULING FACILITY

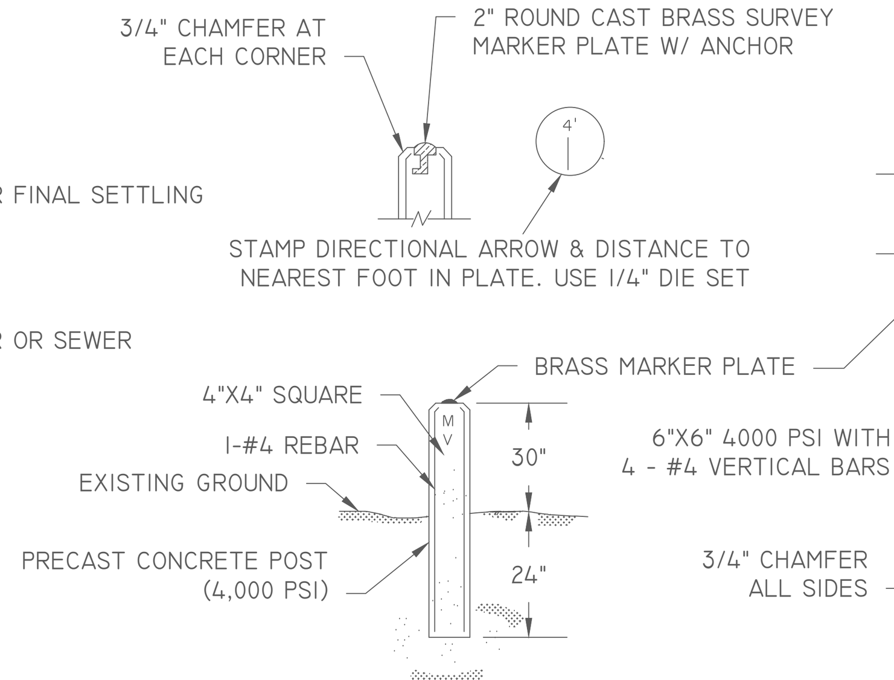
WATER AND SEWER PLAN

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

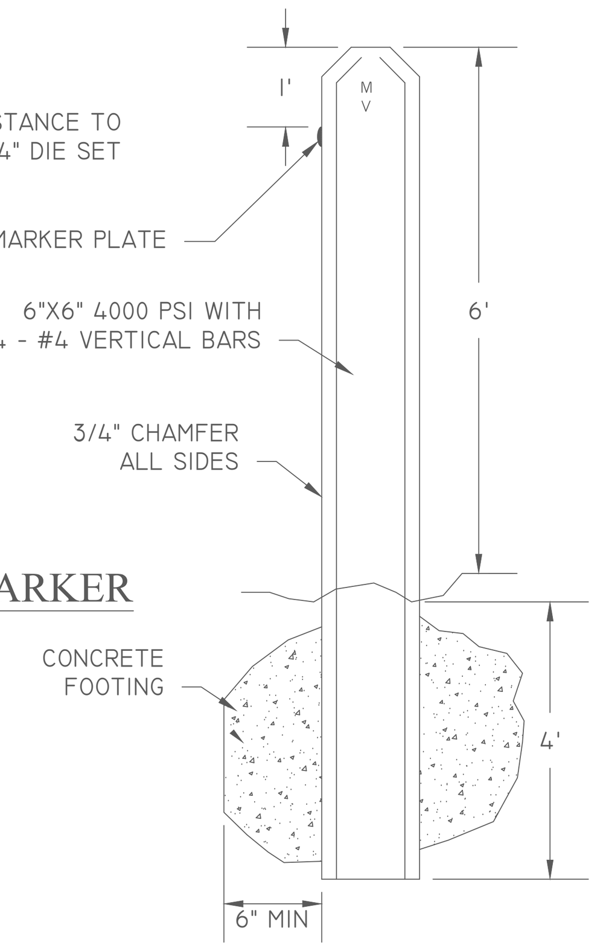
C2.2



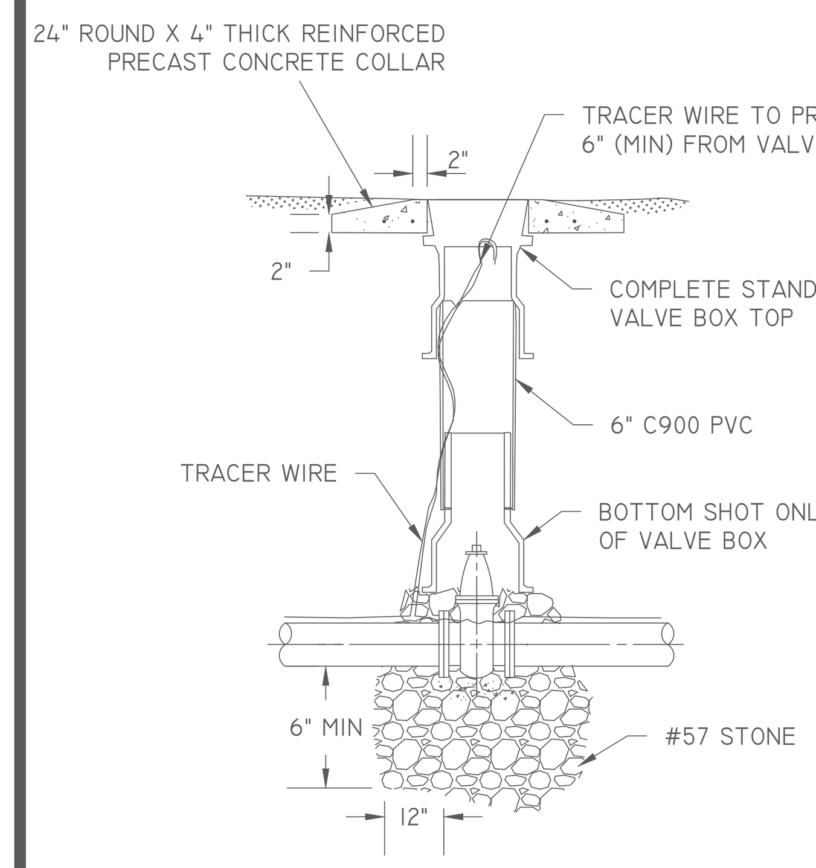
CONCRETE COLLAR



URBAN CONCRETE MARKER



RURAL CONCRETE MARKER

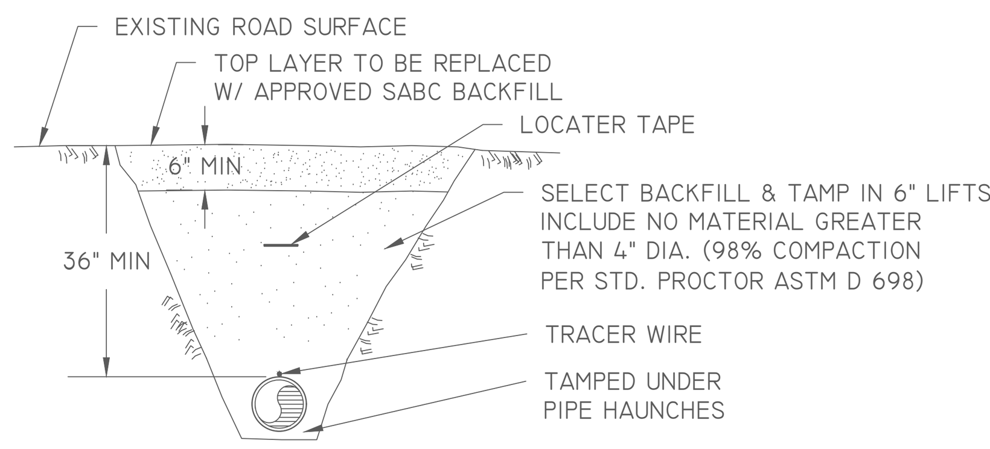


VALVE AND VALVE BOX

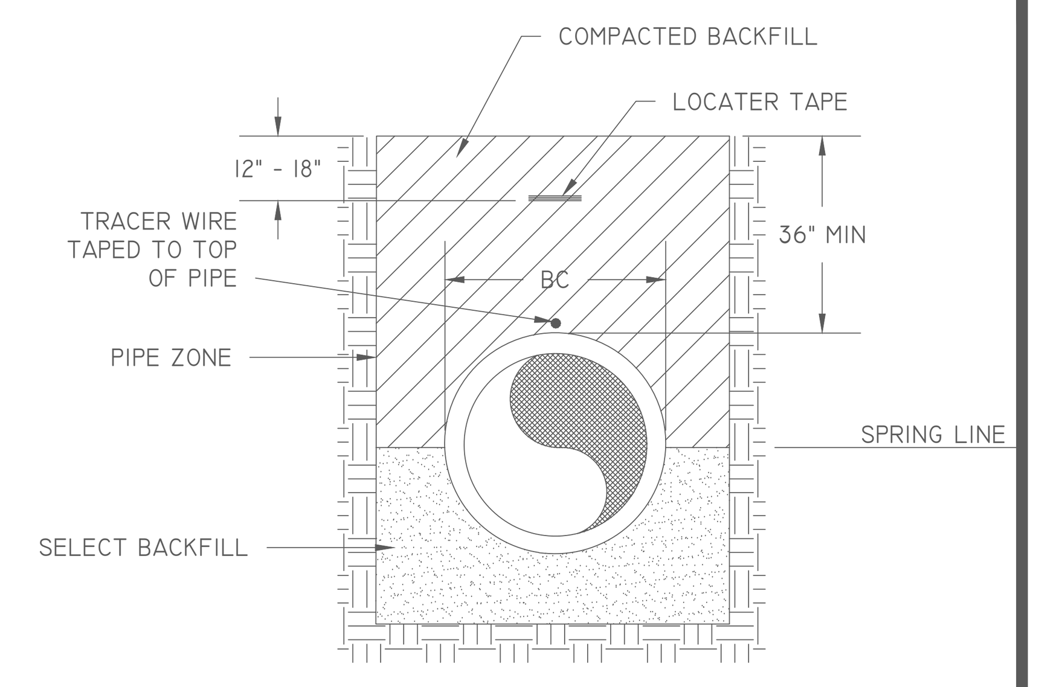
NOTES:

1. MARKERS
   - A. VALVE MARKERS ARE REQUIRED FOR EACH VALVE (EXCEPT HYDRANT VALVES). PIPE LINE MARKERS ARE REQUIRED AT FITTINGS AND EACH 700' WHERE LINES RUN THROUGH AN UNDEVELOPED AREA. AR MANHOLE REQUIRES MANHOLE.
   - B. MARKER PAINTING
     - WATER - PAINTING NOT REQUIRED
     - SEWER INFLUENT - TOP 4" GREEN
     - SEWER EFFLUENT - TOP 4" PURPLE
   - C. MARK MARKERS AS FOLLOWS
     - MV - MAIN VALVE
     - AV - AIR RELEASE VALVE
     - PIPELINE - PIPELINE MARKER
   - D. VALVE AND PIPELINE MARKERS IN MOWED AREAS TO BE SET TO AN EXPOSURE OF NOT MORE THAN 18" OR LESS THAN 6" ABOVE FINAL GRADE.
   - E. IF SOILS ARE NOT STABLE ENOUGH TO MAINTAIN THE URBAN MARKERS VERTICAL, CONCRETE FOOTINGS ARE TO BE INSTALLED.
2. VALVE BOX LID SHALL BE WITHIN ½" OF COLLAR TOP. COLLAR TOP IS TO BE NO MORE THAN 1" ABOVE FINAL GRADE AND NO LOWER THAN 1" BELOW FINAL GRADE.
3. CONCRETE COLLAR NOT REQUIRED IN PAVEMENT. VALVE BOX TOP IS TO BE TRAFFIC RATED.

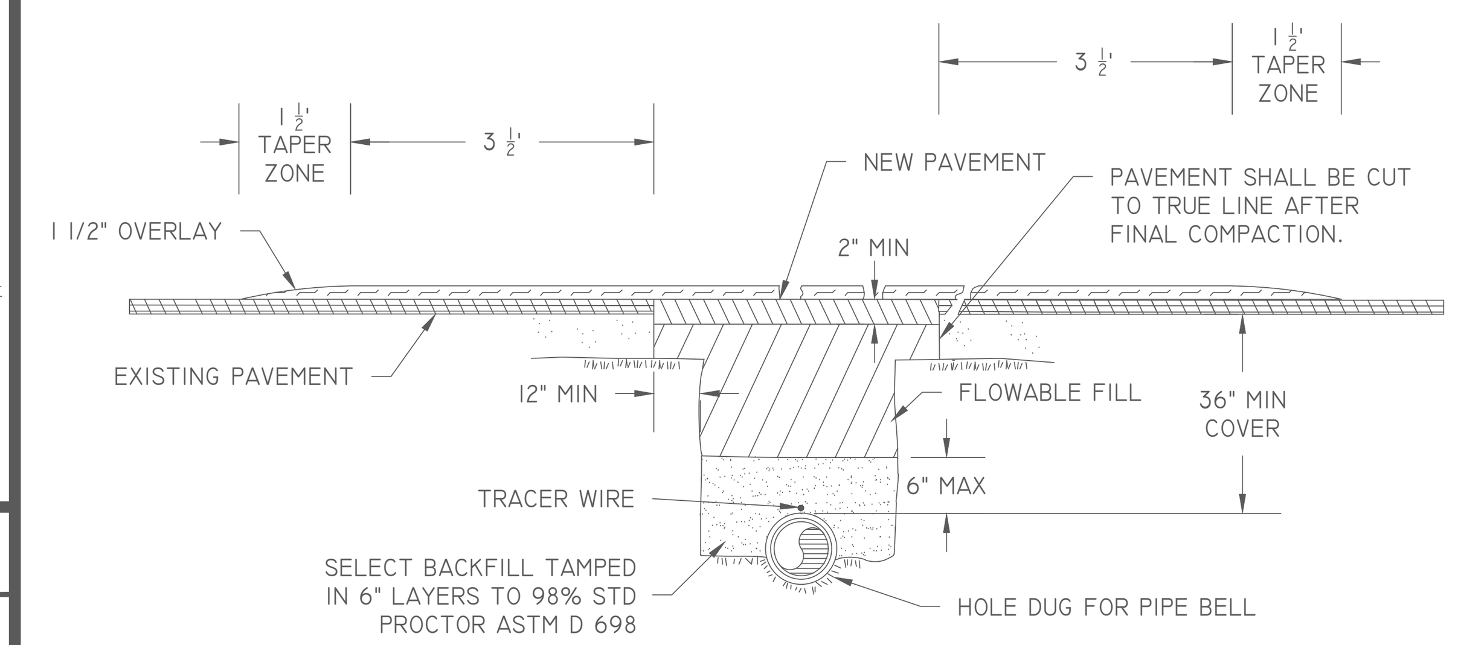
BEAUFORT - JASPER WATER & SEWER AUTHORITY		
STANDARD VALVE DETAIL		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-12
SCALE: N.T.S.	APPROVED BY: ERS	



UNPAVED ROADWAY BEDDING DETAIL



TYPICAL BEDDING DETAIL

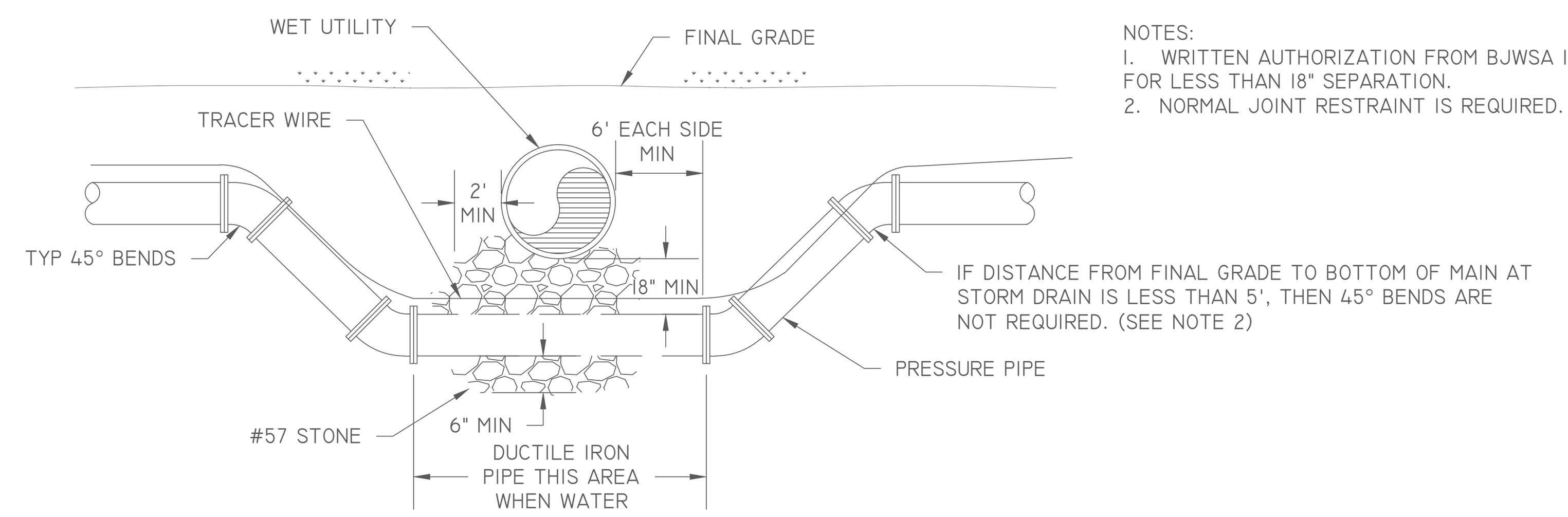


PAVED AREA DETAIL

NOTES:

1. PAVEMENT CUT TO EXTEND 12" BEYOND EDGES OF TRENCH AS SHOWN.
2. MATCH EXISTING PAVEMENT TYPE AND THICKNESS. MINIMUM THICKNESS OVER TRENCH IS 2".
3. ALL INSTALLATIONS IN PUBLIC ROADWAYS SHALL COMPLY WITH CONDITIONS OUTLINED ON APPLICABLE ENCROACHMENT PERMIT.

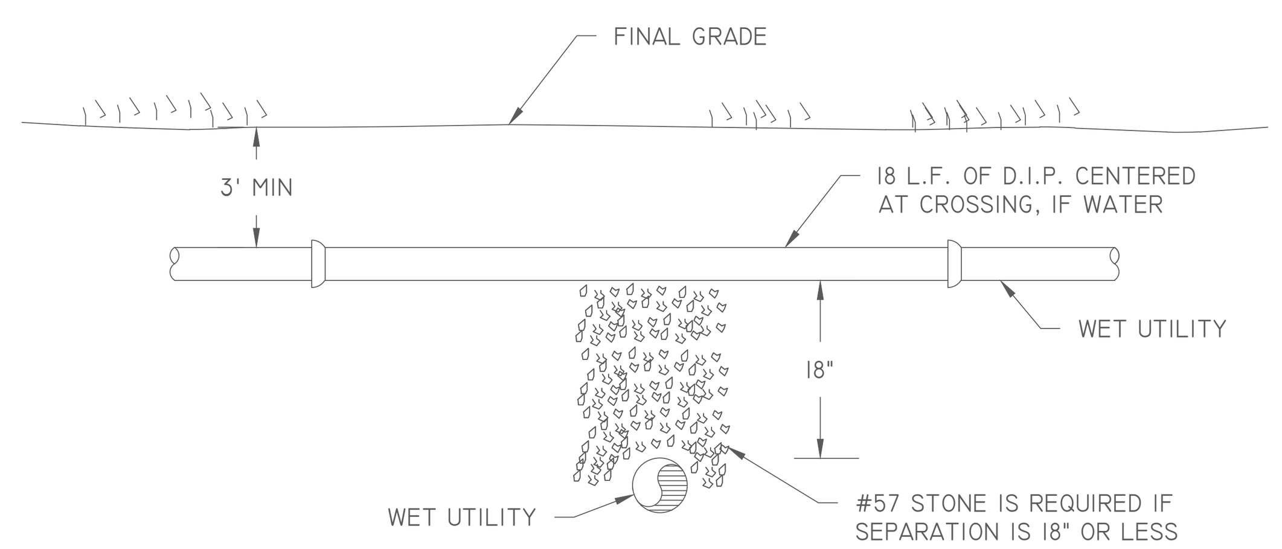
BEAUFORT - JASPER WATER & SEWER AUTHORITY		
BEDDING PRESSURE PIPE DETAIL		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-02
SCALE: N.T.S.	APPROVED BY: ERS	



PRESSURE PIPE UNDER WET UTILITY
FOR FINAL DEPTH 5' OR GREATER

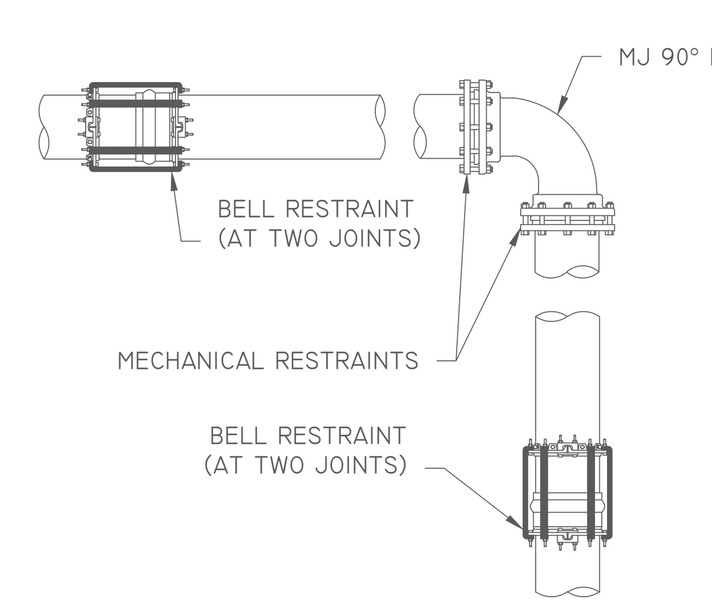
NOTES:

1. WRITTEN AUTHORIZATION FROM BJWSA IS REQUIRED FOR LESS THAN 18" SEPARATION.
2. NORMAL JOINT RESTRAINT IS REQUIRED.



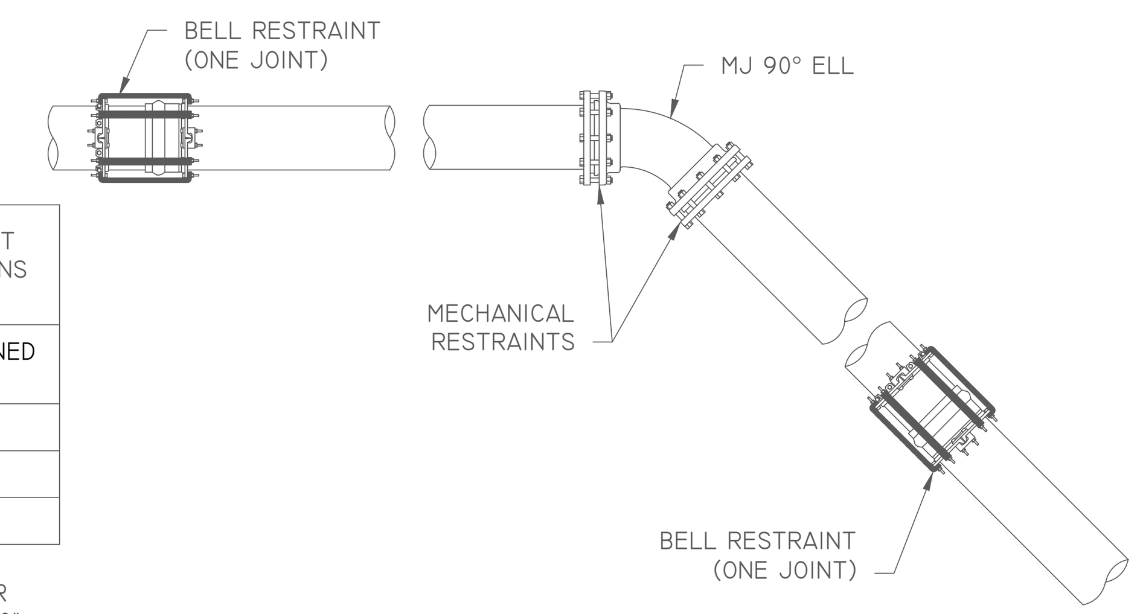
WET UTILITY CROSSING

BEAUFORT - JASPER WATER & SEWER AUTHORITY		
WET UTILITY CROSSING		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-16
SCALE: N.T.S.	APPROVED BY: ERS	

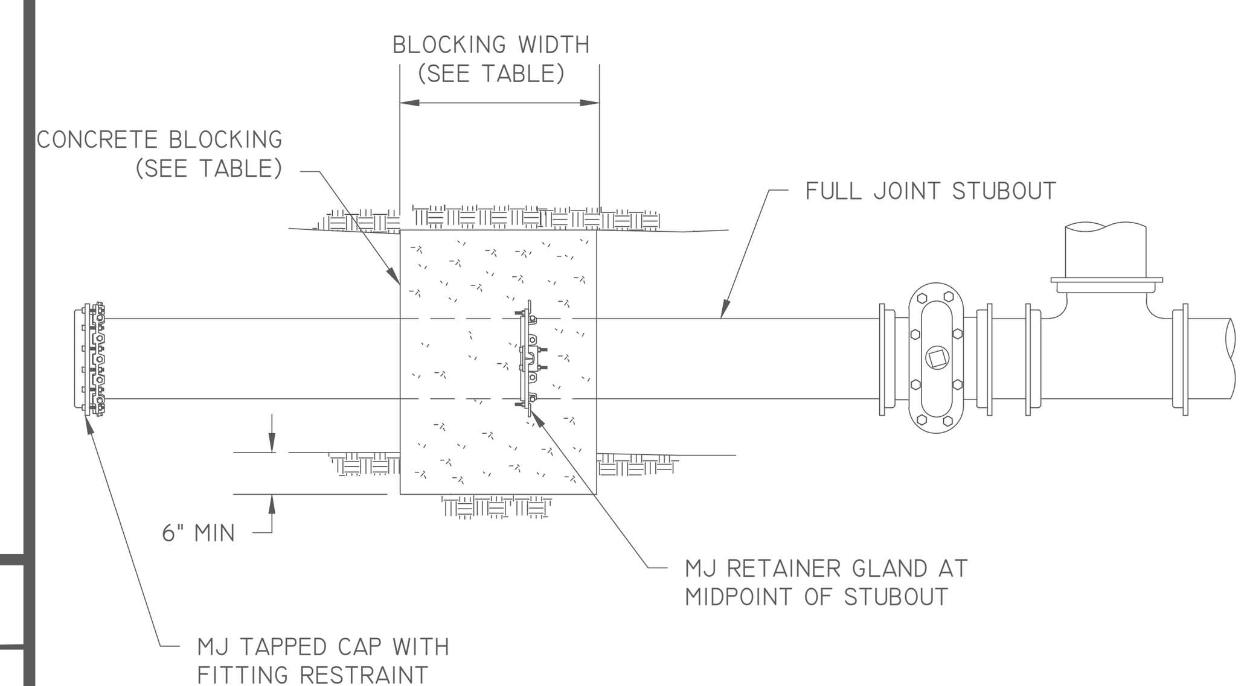


MINIMUM RESTRAINT DISTANCE FOR MAINS 10" AND SMALLER	
FITTING	**RESTRAINED JOINTS
22.5° ELL	1
45° ELL	1
90° ELL	2

**USE ENGINEER'S RECOMMENDATIONS FOR SIZES GREATER THAN 10"



TYPICAL FITTING AND JOINT RESTRAINT



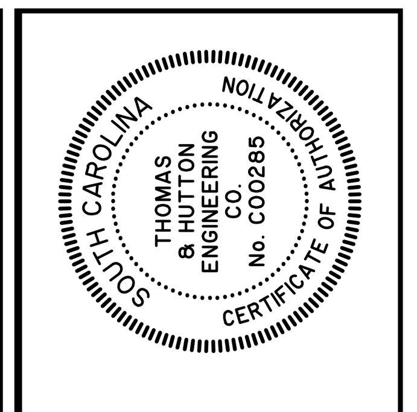
TYPICAL FUTURE STUBOUT

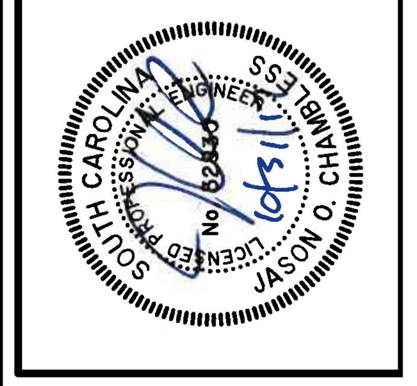
MINIMUM BLOCKING DIMENSIONS		
PIPE SIZE (IN)	BLOCKING BEARING AREA (FT²)	BLOCKING WIDTH (IN)
4	2	24
6	4	24
8	7	36
10	11	36
12	15	36
OVER 12" BY THE DESIGN ENGINEER		

NOTE:

1. THE MINIMUM DIMENSIONS TABLE IS BASED ON AN ASSUMED SOIL BEARING OF 2000 LBS PER SQ. FT. IF BEARING VALUE FOR SOIL IS LESS THAN AREA SHOWN HEREIN SHOULD BE INCREASED ACCORDINGLY.
2. JOINT IS DEFINED TO BE A MINIMUM OF 18' IN LENGTH.

BEAUFORT - JASPER WATER & SEWER AUTHORITY		
MECHANICAL RESTRAINT		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: G-08
SCALE: N.T.S.	APPROVED BY: ERS	





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NO.	REVISIONS	BY	DATE

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Engineering | Surveying | Planning | GIS | Consulting

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www.thomasandhutton.com

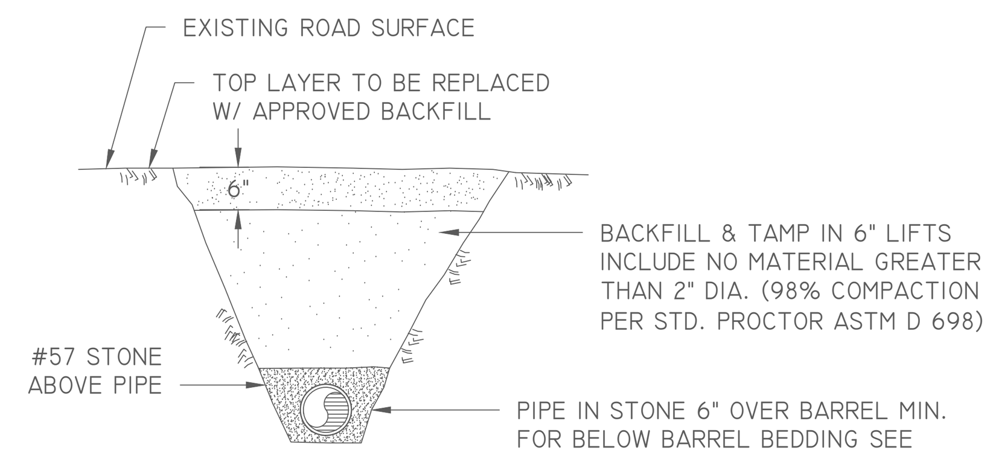
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

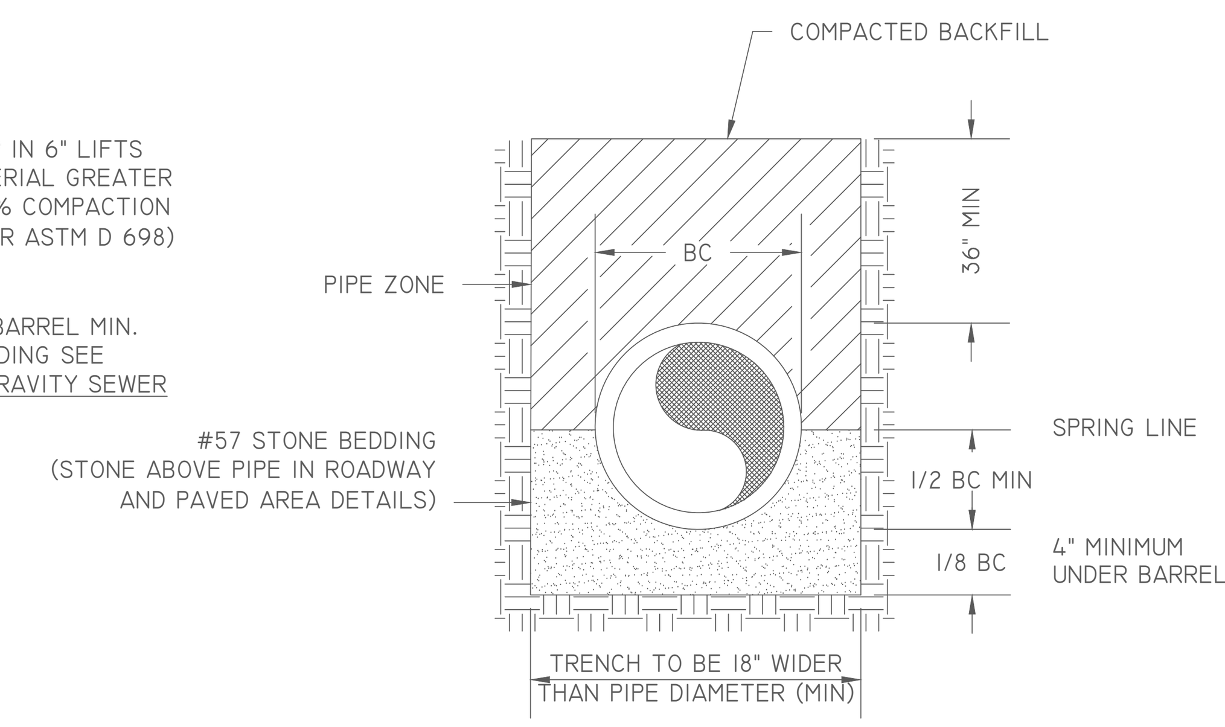
WATER AND SEWER DETAILS

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 1'

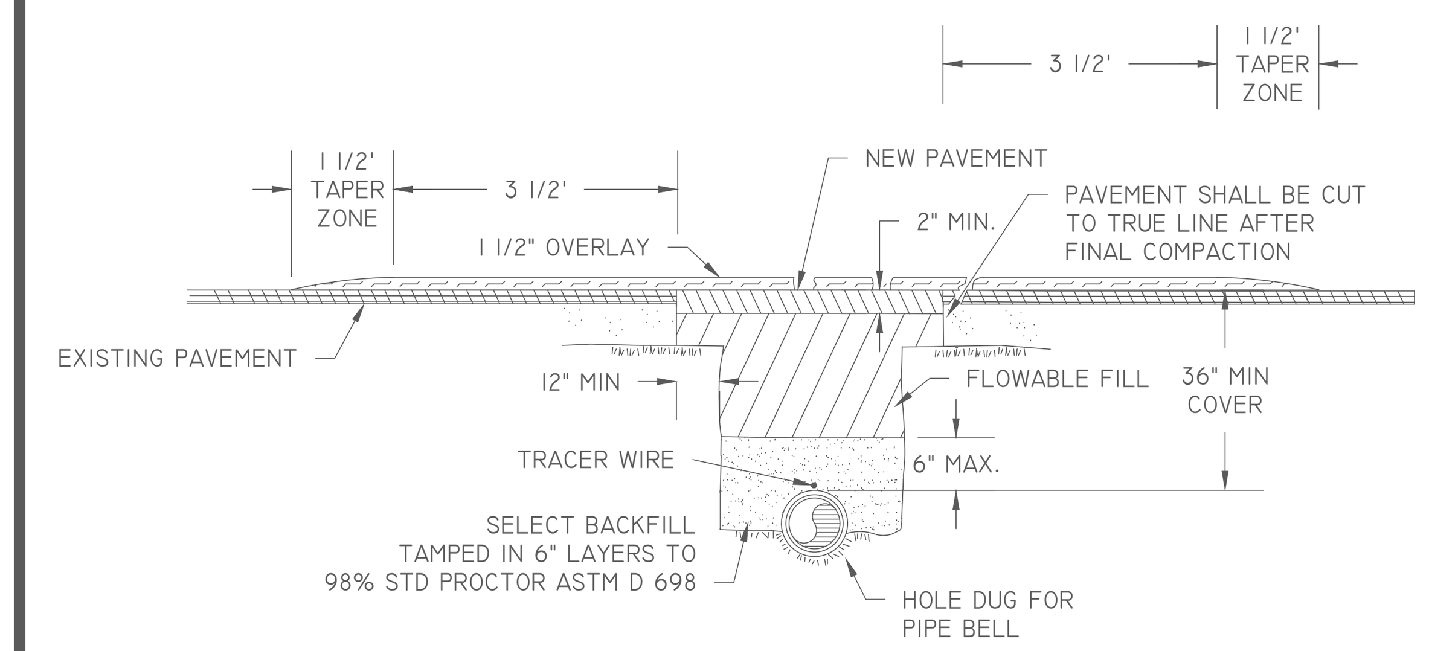
C2.3



UNPAVED ROADWAY BEDDING DETAIL



TYPICAL BEDDING FOR GRAVITY SEWER PIPE

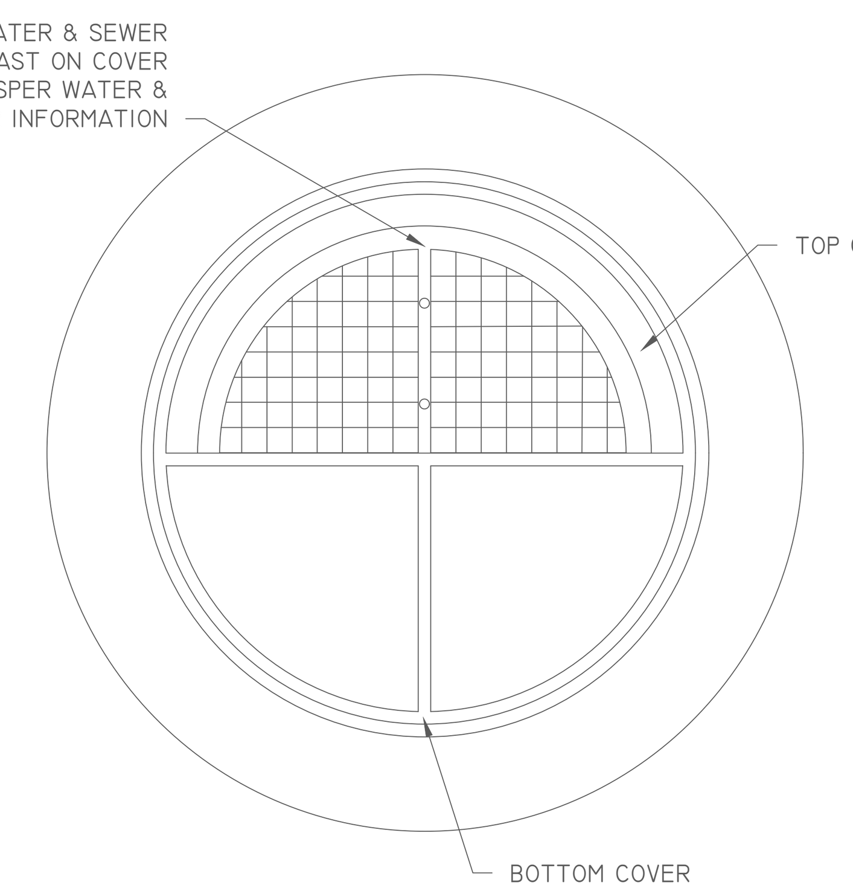


PAVED AREA DETAIL

NOTES:
1. PAVEMENT CUT TO EXTEND 12" BEYOND EDGES OF TRENCH INSTALLATION CUT. FINAL CUT TO BE MADE AFTER FINAL COMPACTION.
2. MATCH EXISTING PAVEMENT TYP. THICKNESS IS TO BE 2" UNLESS EXISTING IS THICKER.
3. ALL INSTALLATIONS IN PUBLIC ROADWAYS SHALL COMPLY WITH CONDITIONS OUTLINED ON APPLICABLE ENCROACHMENT PERMIT, IF MORE STRINGENT.

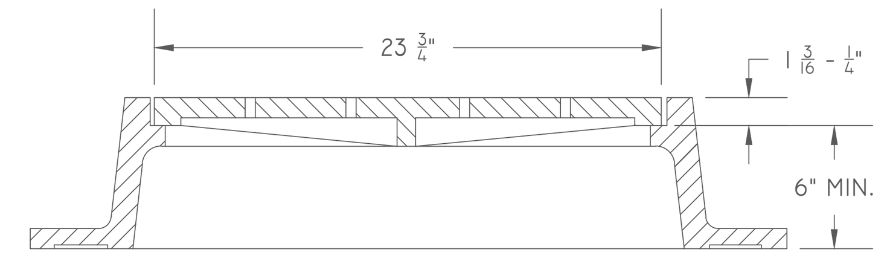
BEAUFORT - JASPER WATER & SEWER AUTHORITY		
BEDDING DETAIL, GRAVITY PIPE		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: S-01
SCALE: N.T.S.	APPROVED BY: ERS	

LOGO

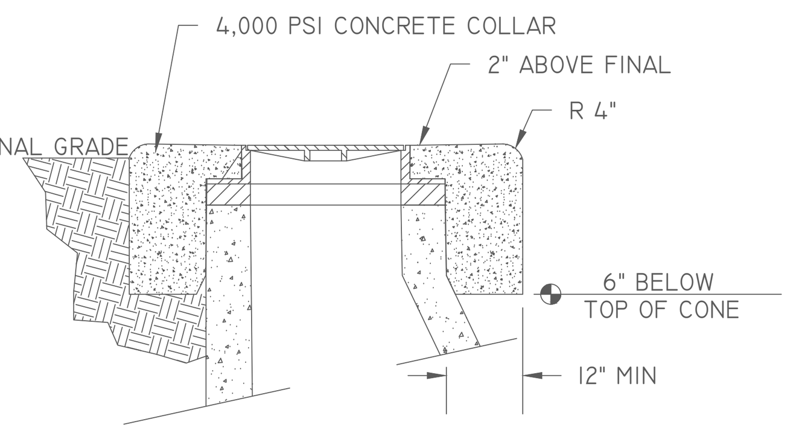


NOTES:

1. CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE, DISTORTION OR OTHER DEFECTS. THEY SHALL BE SMOOTH AND WELL CLEANED BY SHOT BLASTING OR BY SOME OTHER APPROVED METHOD UNLESS AN ALTERNATIVE SPECIFICATION IS MADE.
2. MATERIALS USED IN THE MANUFACTURE OF CASTINGS SHOULD CONFORM TO ASTM, AASHTO, ASA, MIL, AMS OR FEDERAL SPECIFICATIONS FOR GRAY IRON OR DUCTILE IRON AS FOLLOWS: GRAY IRON-ASTM CLASS 35, DUCTILE IRON-GRADE 60-40-18.
3. ALL CASTINGS SHALL BE MANUFACTURED TRUE TO PATTERN

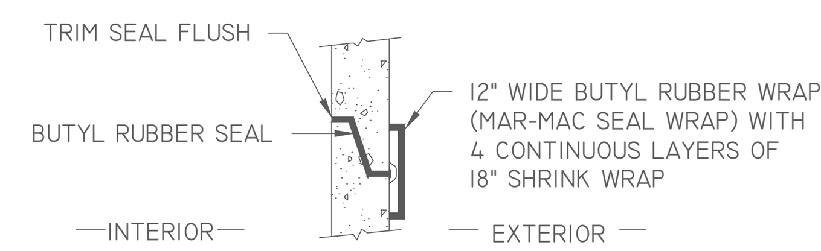


BEAUFORT - JASPER WATER & SEWER AUTHORITY		
MANHOLE, COVER AND FRAME		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: S-05
SCALE: N.T.S.	APPROVED BY: ERS	

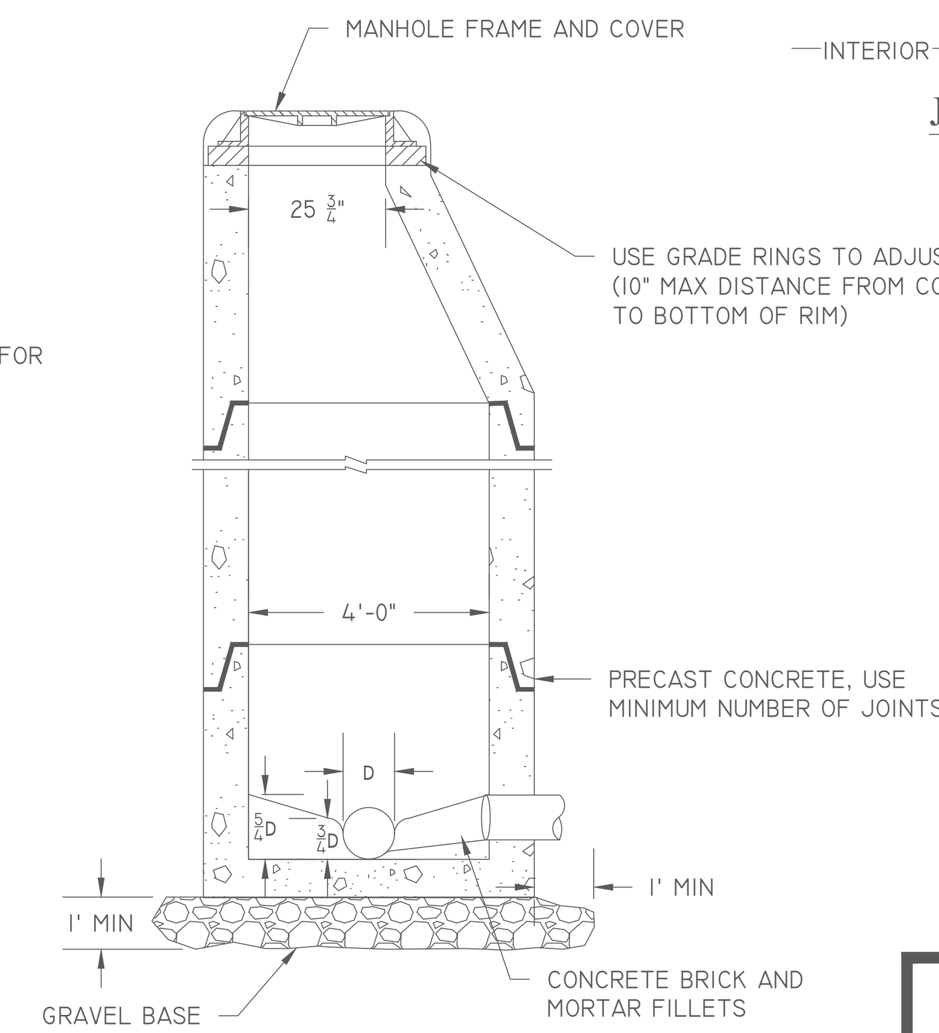


RURAL MANHOLE PROTECTIVE COLLAR

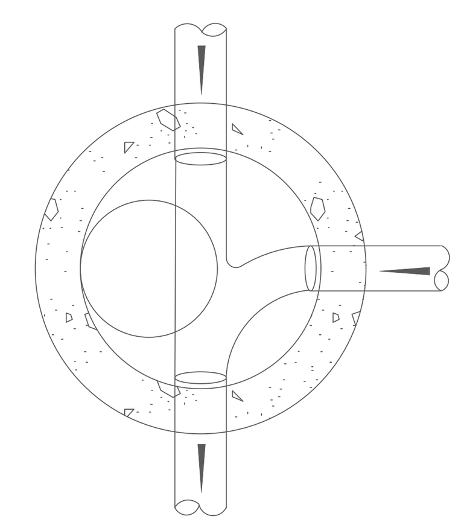
NOTES:
1. REFER TO STANDARD SPECIFICATIONS FOR INTERIOR COATING REQUIREMENTS.
2. CONCRETE GROUTING IS NOT ALLOWED INSIDE MANHOLES.
3. RIM ELEVATION ON RURAL MANHOLES SHALL BE 6" HIGHER THAN NEAREST MANHOLE OUTSIDE THE RURAL AREA.



JOINT DETAIL



SECTION VIEW



PLAN VIEW

BEAUFORT - JASPER WATER & SEWER AUTHORITY		
STANDARD MANHOLE		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: S-09
SCALE: N.T.S.	APPROVED BY: ERS	

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

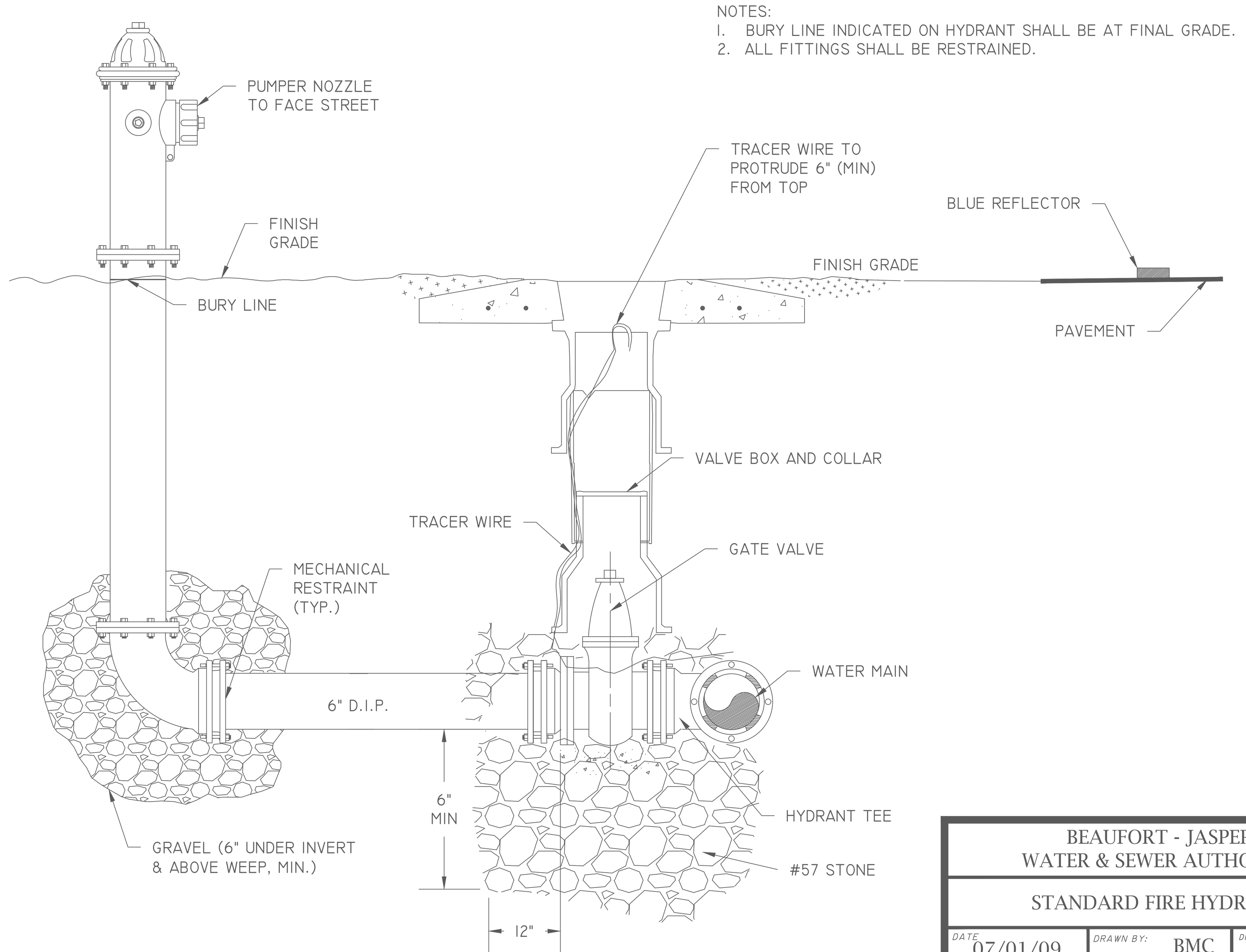
HARDEEVILLE HAULING FACILITY

WATER AND SEWER DETAILS

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 1'

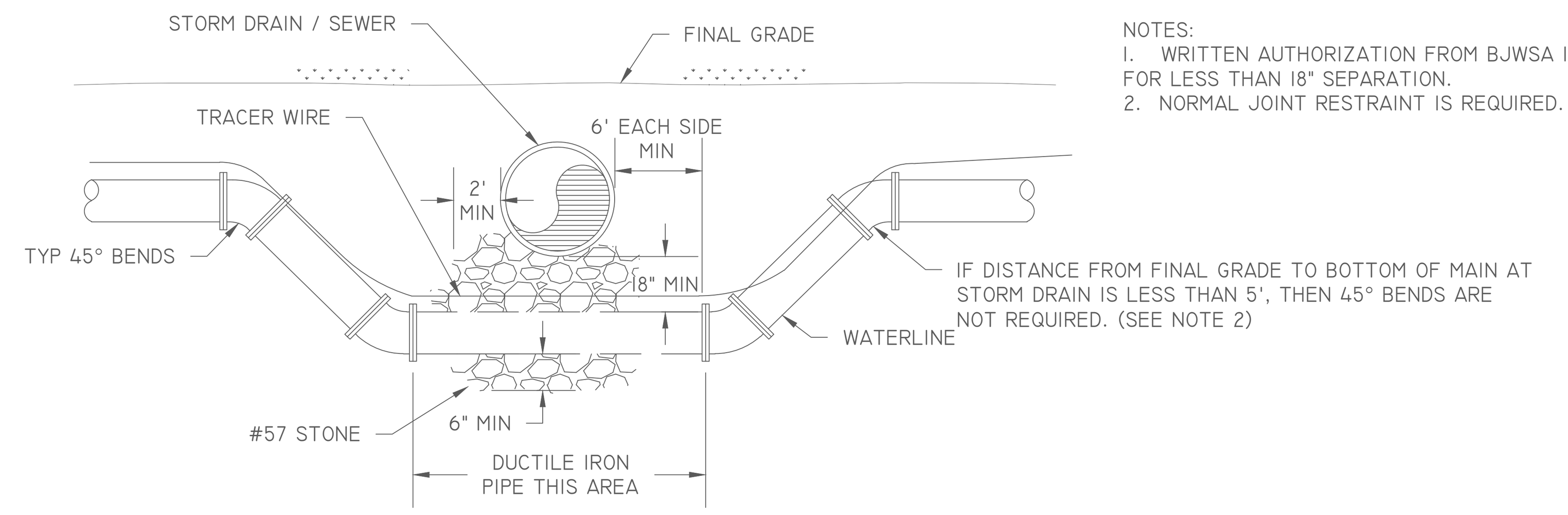
C2.4

NOTES:
1. BURY LINE INDICATED ON HYDRANT SHALL BE AT FINAL GRADE.
2. ALL FITTINGS SHALL BE RESTRAINED.

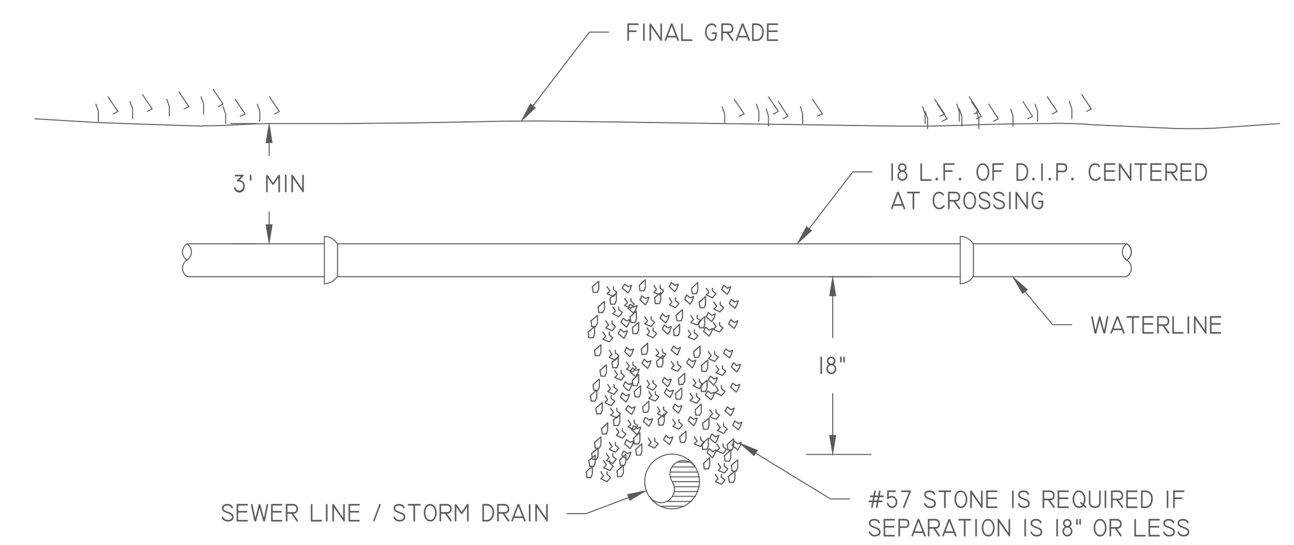


BEAUFORT - JASPER WATER & SEWER AUTHORITY		
STANDARD FIRE HYDRANT		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: W-03
SCALE: N.T.S.	APPROVED BY: ERS	

NOTES:
1. WRITTEN AUTHORIZATION FROM BJWSA IS REQUIRED FOR LESS THAN 18" SEPARATION.
2. NORMAL JOINT RESTRAINT IS REQUIRED.



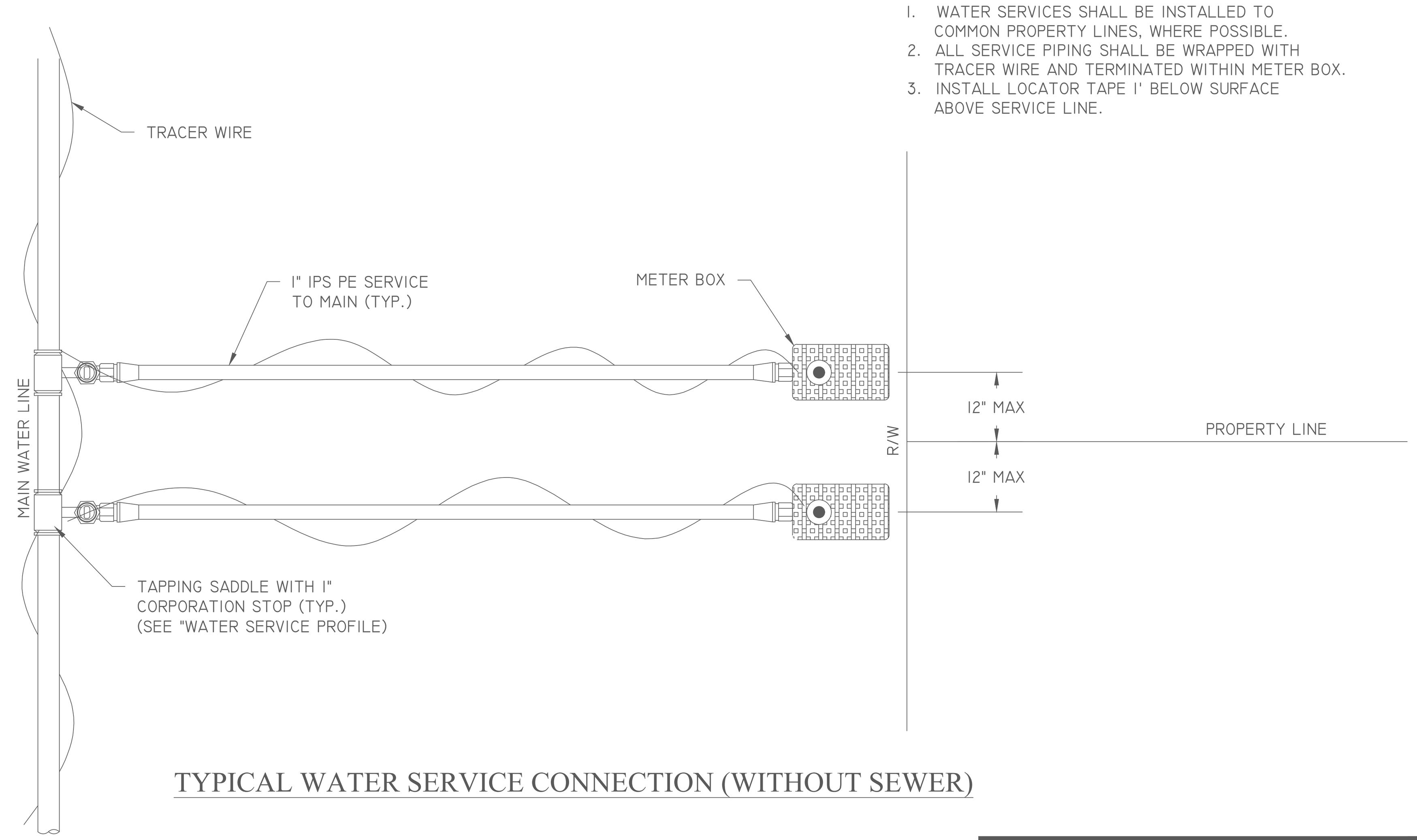
WATER UNDER STORM DRAIN / SEWER FOR FINAL DEPTH 5' OR GREATER



WATER OVER SANITARY SEWER / STORM DRAIN

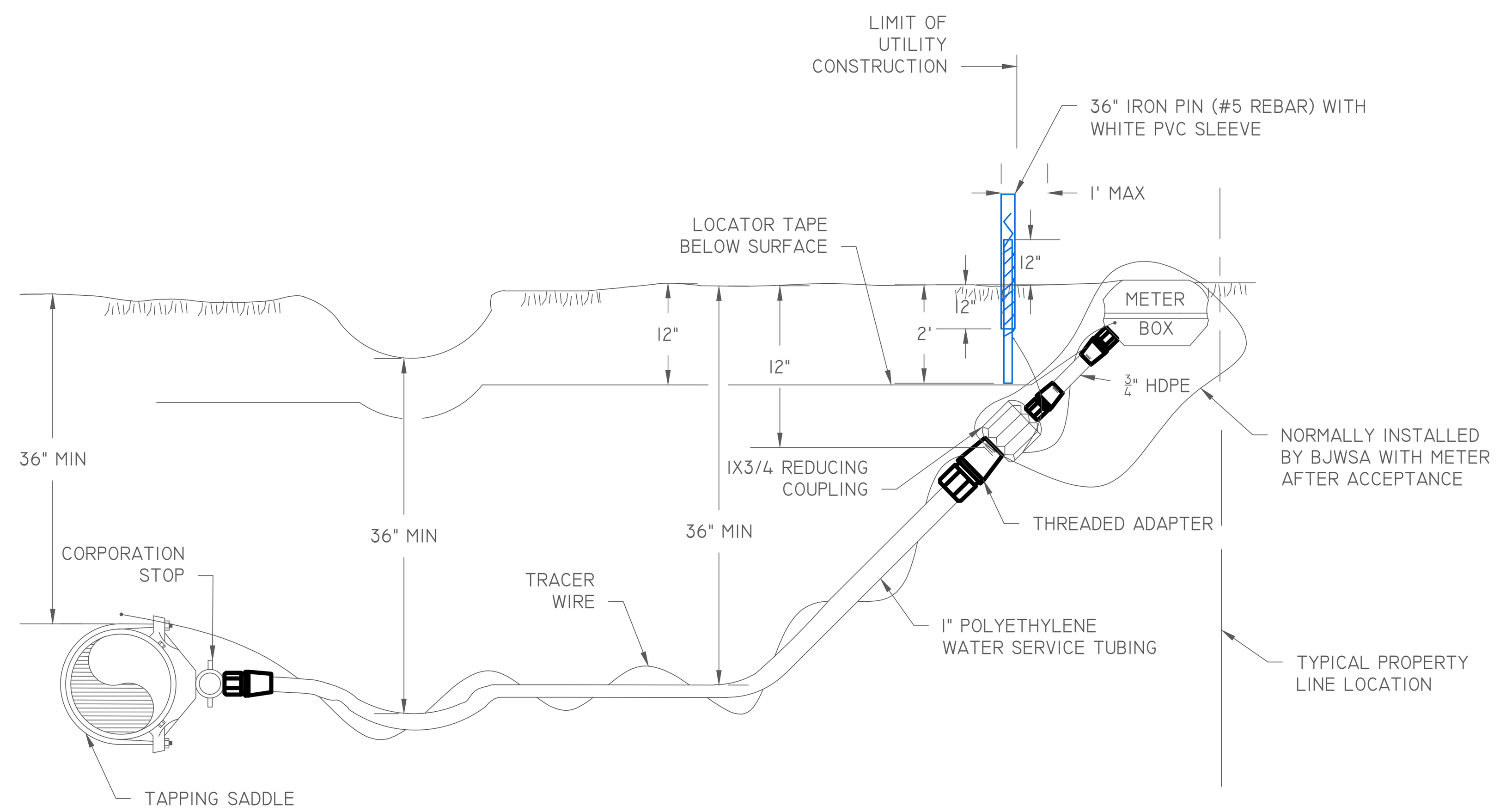
BEAUFORT - JASPER WATER & SEWER AUTHORITY		
RESERVED		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: W-07
SCALE: N.T.S.	APPROVED BY: ERS	

NOTES:
1. WATER SERVICES SHALL BE INSTALLED TO COMMON PROPERTY LINES, WHERE POSSIBLE.
2. ALL SERVICE PIPING SHALL BE WRAPPED WITH TRACER WIRE AND TERMINATED WITHIN METER BOX.
3. INSTALL LOCATOR TAPE 1' BELOW SURFACE ABOVE SERVICE LINE.



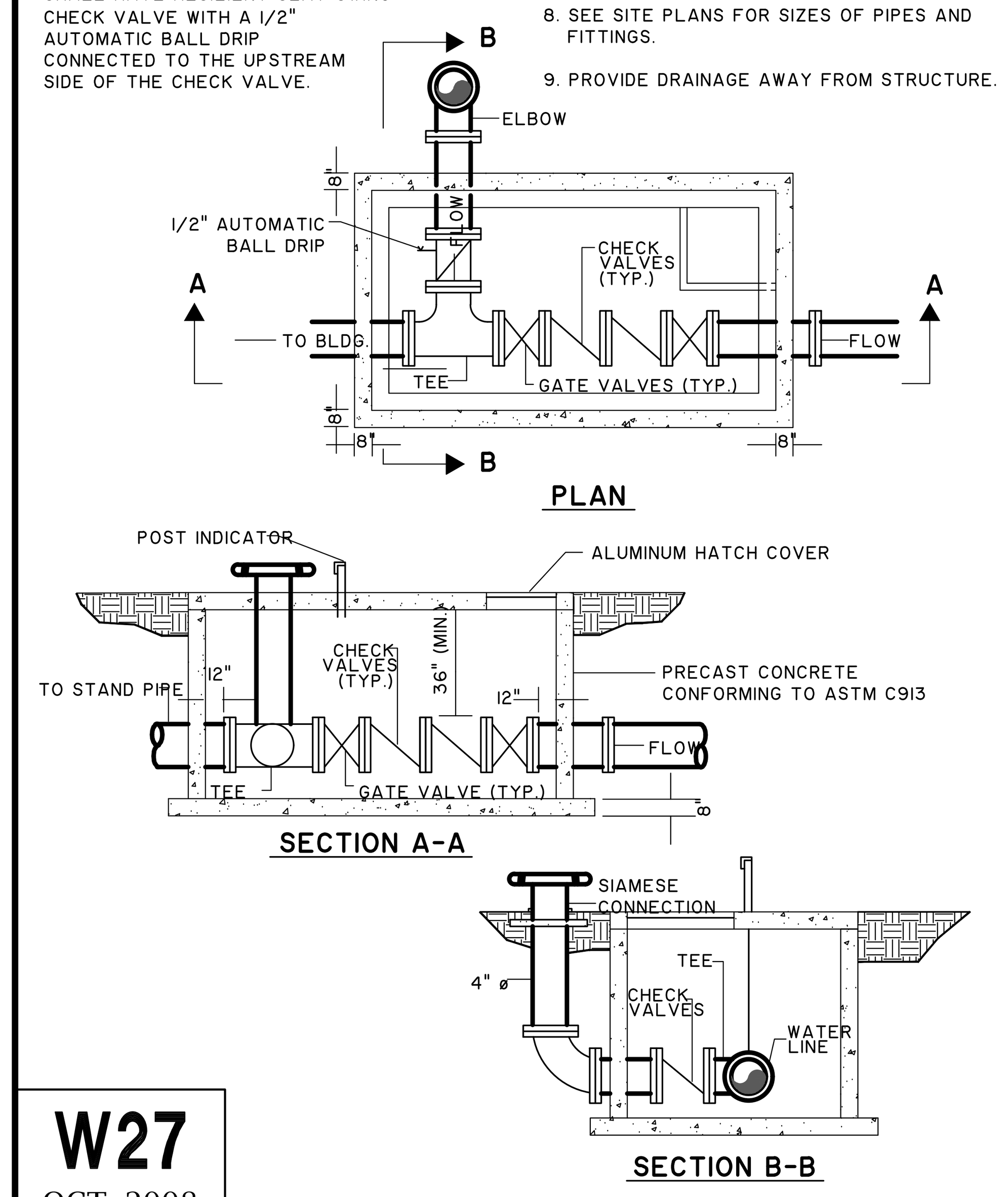
TYPICAL WATER SERVICE CONNECTION (WITHOUT SEWER)

BEAUFORT - JASPER WATER & SEWER AUTHORITY		
WATER SERVICE PLAN VIEW		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: W-08
SCALE: N.T.S.	APPROVED BY: ERS	



BEAUFORT - JASPER WATER & SEWER AUTHORITY		
WATER SERVICE PROFILE		
DATE: 07/01/09	DRAWN BY: BMC	DRAWING #: W-09
SCALE: N.T.S.	APPROVED BY: ERS	

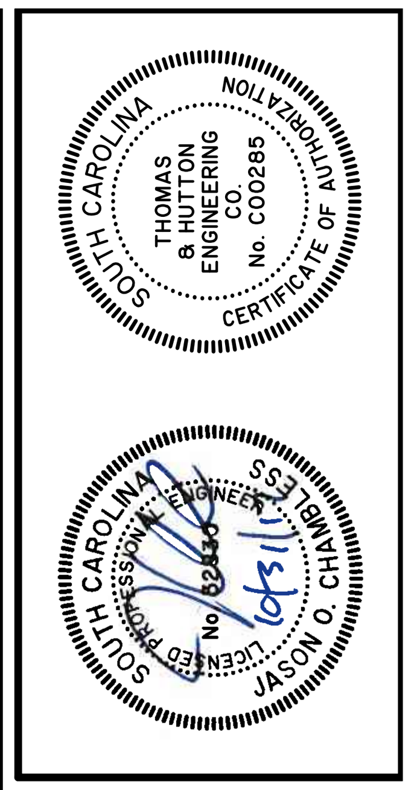
NOTES:
1. THE VALVE BOX SHALL BE SIZED TO ACCOMODATE ALL PROPOSED EQUIPMENT.
2. POST INDICATOR VALVE SHALL BE INSTALLED IF REQUIRED BY NFPA 13 OR OTHER REGULATORY AGENCIES.
3. FIRE LINE CHECK VALVE ON MAIN LINE SHALL BE DOUBLE DETECTOR TYPE WITH BYPASS METER. FIRE DEPARTMENT CONNECTION LINE SHALL HAVE RESILIENT SEAT SWING CHECK VALVE WITH A 1/2" AUTOMATIC BALL DRIP CONNECTED TO THE UPSTREAM SIDE OF THE CHECK VALVE.
4. VALVES FOR DOUBLE DETECTOR CHECKS SHALL BE OS & Y RESILIENT SEAT GATE VALVES.
5. THERE SHALL BE NO SHUTOFF VALVE IN THE FIRE DEPARTMENT CONNECTION(PER NFPA 13)
6. ALL FITTINGS SHALL BE FLANGED INSIDE OF VAULT. ALL PIPING SHALL BE DUCTILE IRON.
7. ALL PIPING SHALL BE DUCTILE IRON.
8. SEE SITE PLANS FOR SIZES OF PIPES AND FITTINGS.
9. PROVIDE DRAINAGE AWAY FROM STRUCTURE.



W27
OCT. 2008
THOMAS & HUTTON ENGINEERING CO.

BUILDING FIRE SERVICE DETAIL

NOT TO SCALE



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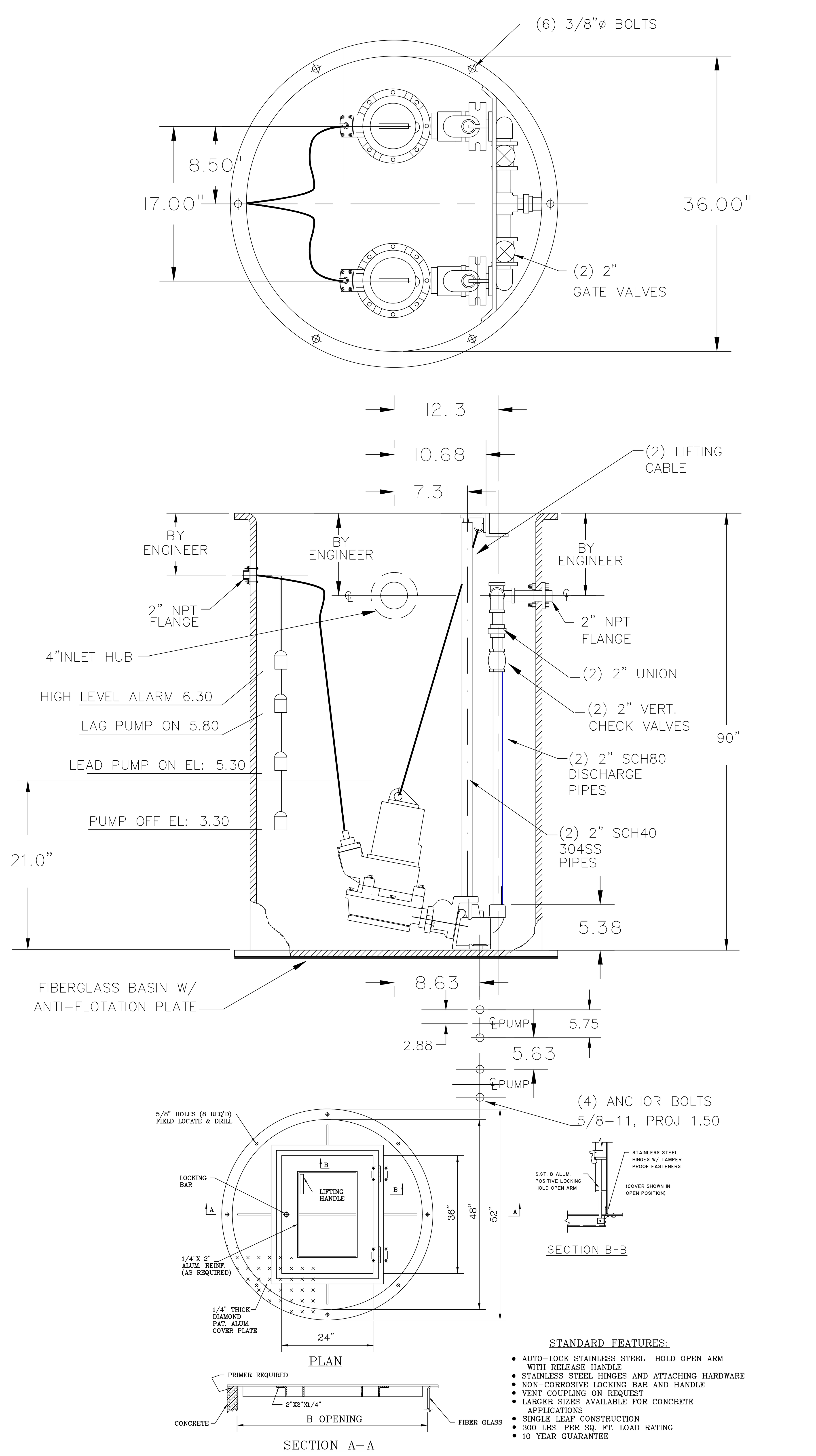
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

WATER AND SEWER DETAILS

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 1'

C2.5



Furnish two ABS heavy duty submersible grinder pumps. Pumps shall be connected to the discharge piping when lowered onto the discharge connection by one 2" dia. Sch40 304SS rail. Pump shall be centrifugal type with rotating cutter mounted on the pump shaft. The stationary cutter shall be mounted in the adjustable bottom plate. Shreading shall occur outside of volute to avoid clogging. The cutter shall be super abrasive material and hardness of 58-62 Rockwell C. Each pump shall be equiped with two seals. The lower shall be mechanical type with silicon carbide faces. The oil chamber shall be fitted with a moisture probe extending from the bottom of the motor housing into the oil chamber. The pump motor shall be air filled and have class "F" insulated moisture resistant windings. Bimetallic thermal switches shall be imbedded into each phase of the winding to sense high temperature.

Float holder and upper guide rail brackets shall be made with 304SS only.

The fiberglass basin shall be manufactured from commercial grade polyster resin.

The fiberglass valve vault shall be 24"x36"x30"

Float switches shall be UL listed type "S-RotoFloat" manufactured by Anchor Scientific, Inc. with 30 feet of STO PVC cable.

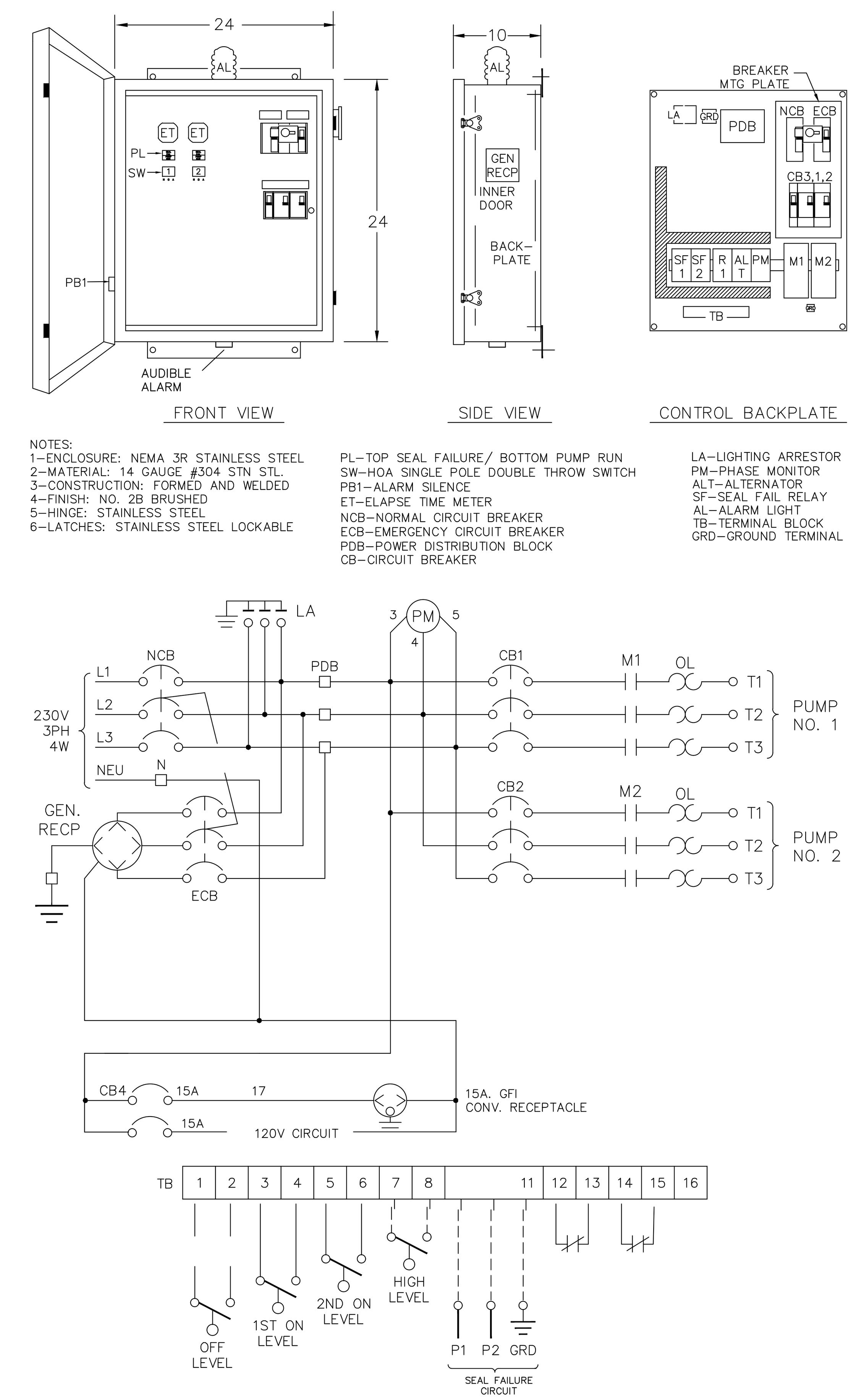
Pump Model: PIR S30/2 Impeller Dia: 150MM

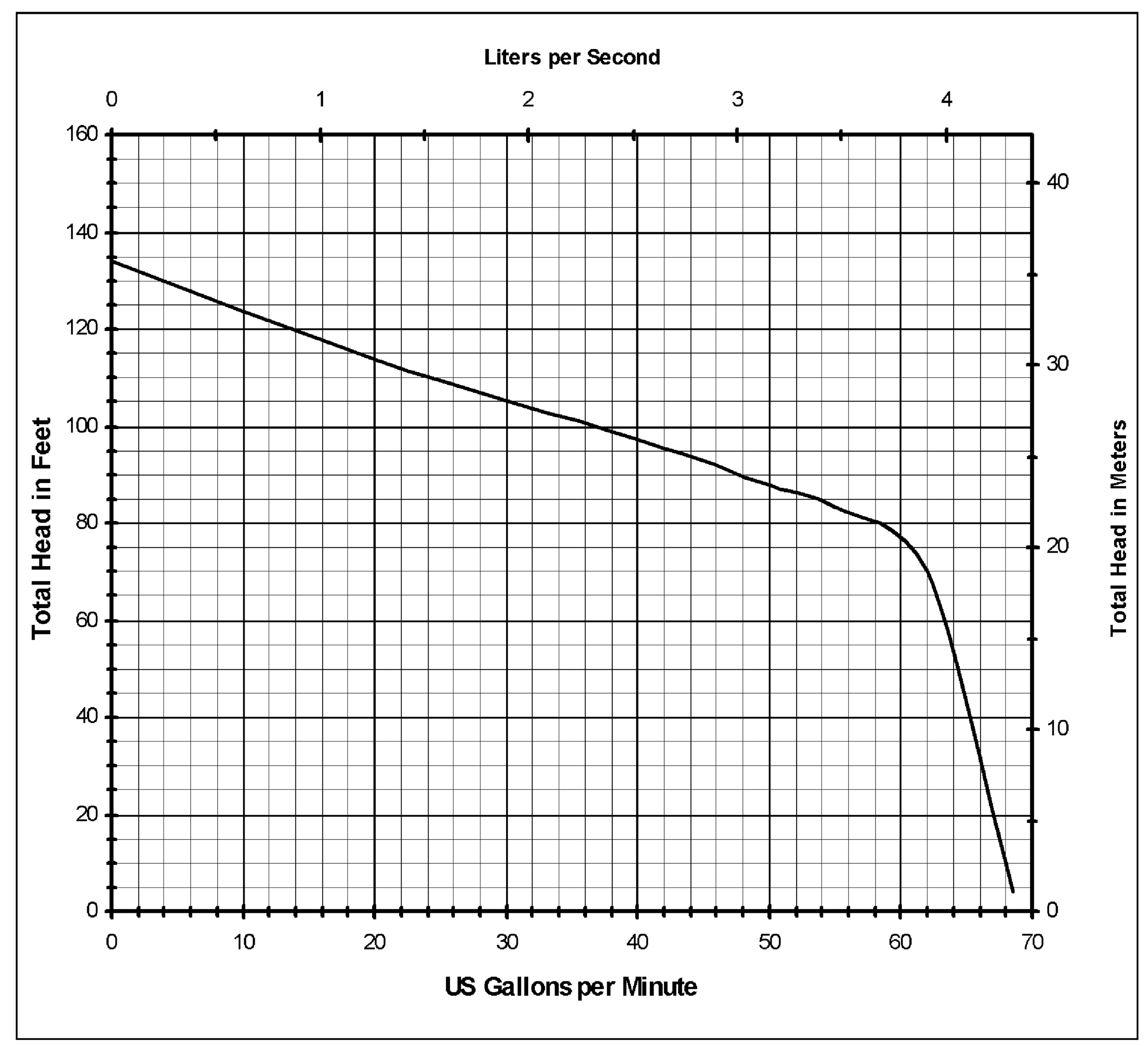
No. Pumps: 2 Motor HP: 4.0

Discharge: 1-1/4" RPM: 3450

Design Flow: 40GPM Voltage: 230

Design TDH: 95FT Phase: THREE





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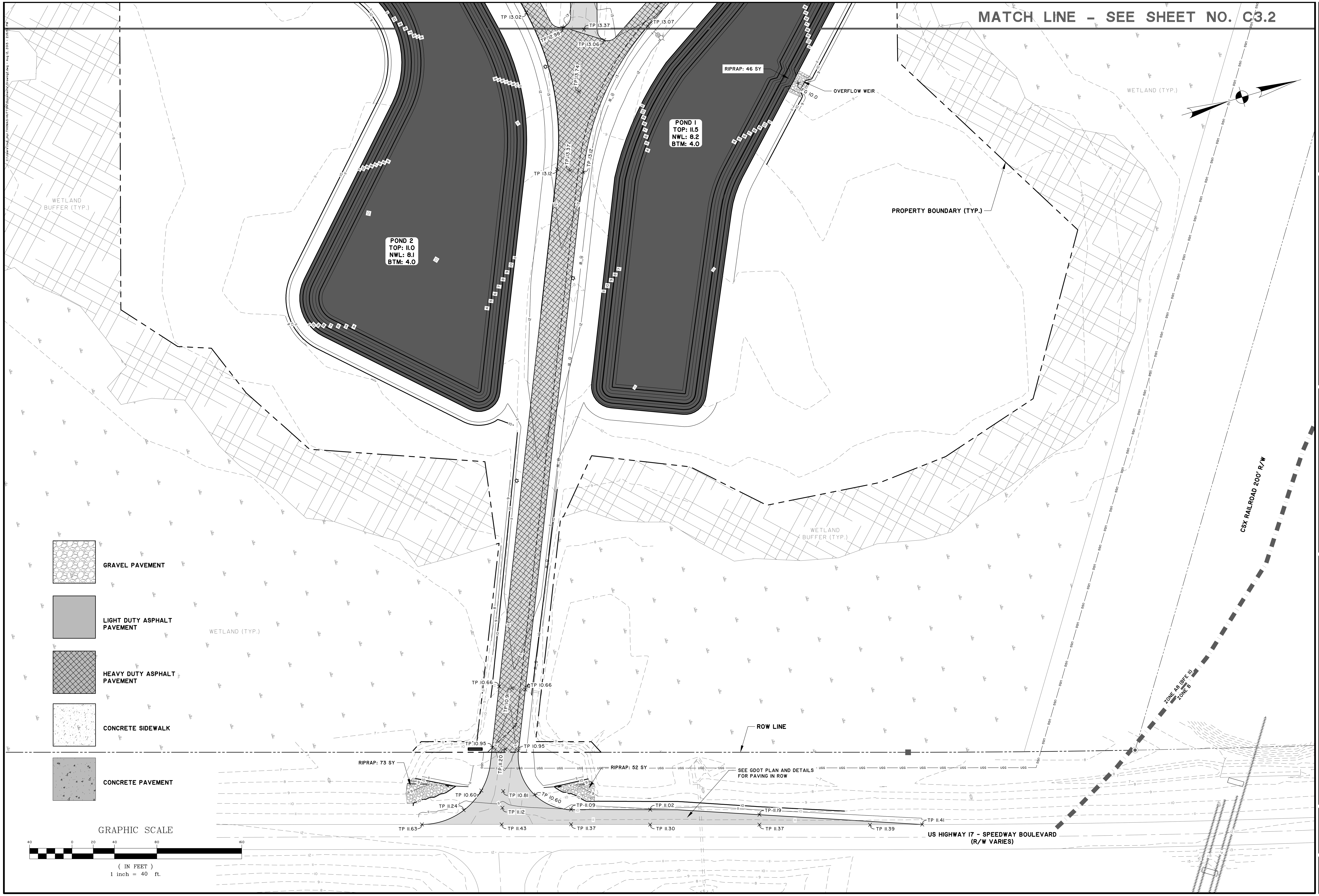
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY
PUMP STATION DETAILS

JOB NO: J-26810.0001
DATE: 10/31/17
DRAWN: WHE
DESIGNED: WHE
REVIEWED:
APPROVED: JOC
SCALE:

C2.6



MATCH LINE - SEE SHEET NO. C3.2
POND 1
TOP: 11.5
NWL: 8.2
BTM: 4.0
POND 2
TOP: 11.0
NWL: 8.1
BTM: 4.0
RIPRAP: 46 SY
OVERFLOW WEIR
PROPERTY BOUNDARY (TYP.)
WETLAND (TYP.)
WETLAND BUFFER (TYP.)
CSX RAILROAD 200' R/W
ZONE A8 (BFE 11)
ZONE B
ROW LINE
RIPRAP: 73 SY
RIPRAP: 52 SY
SEE GDOT PLAN AND DETAILS FOR PAVING IN ROW
US HIGHWAY 17 - SPEEDWAY BOULEVARD
(R/W VARIES)
TP 13.02
TP 13.37
TP 13.07
TP 13.06
TP 12.98
TP 13.14
TP 13.12
TP 13.37
TP 13.12
TP 10.66
TP 10.66
TP 10.91
TP 10.95
TP 10.95
TP 11.20
TP 10.60
TP 10.81
TP 10.60
TP 11.24
TP 11.12
TP 11.09
TP 11.02
TP 11.19
TP 11.41
TP 11.63
TP 11.43
TP 11.37
TP 11.30
TP 11.37
TP 11.39
GRAVEL PAVEMENT
LIGHT DUTY ASPHALT PAVEMENT
HEAVY DUTY ASPHALT PAVEMENT
CONCRETE SIDEWALK
CONCRETE PAVEMENT
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

SOUTH CAROLINA
THOMAS & HUTTON ENGINEERING CO.
No. C00285
CERTIFICATE OF AUTHORIZATION

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NO	REVISIONS	BY	DATE

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Savannah, GA 31405 • 912.234.5300
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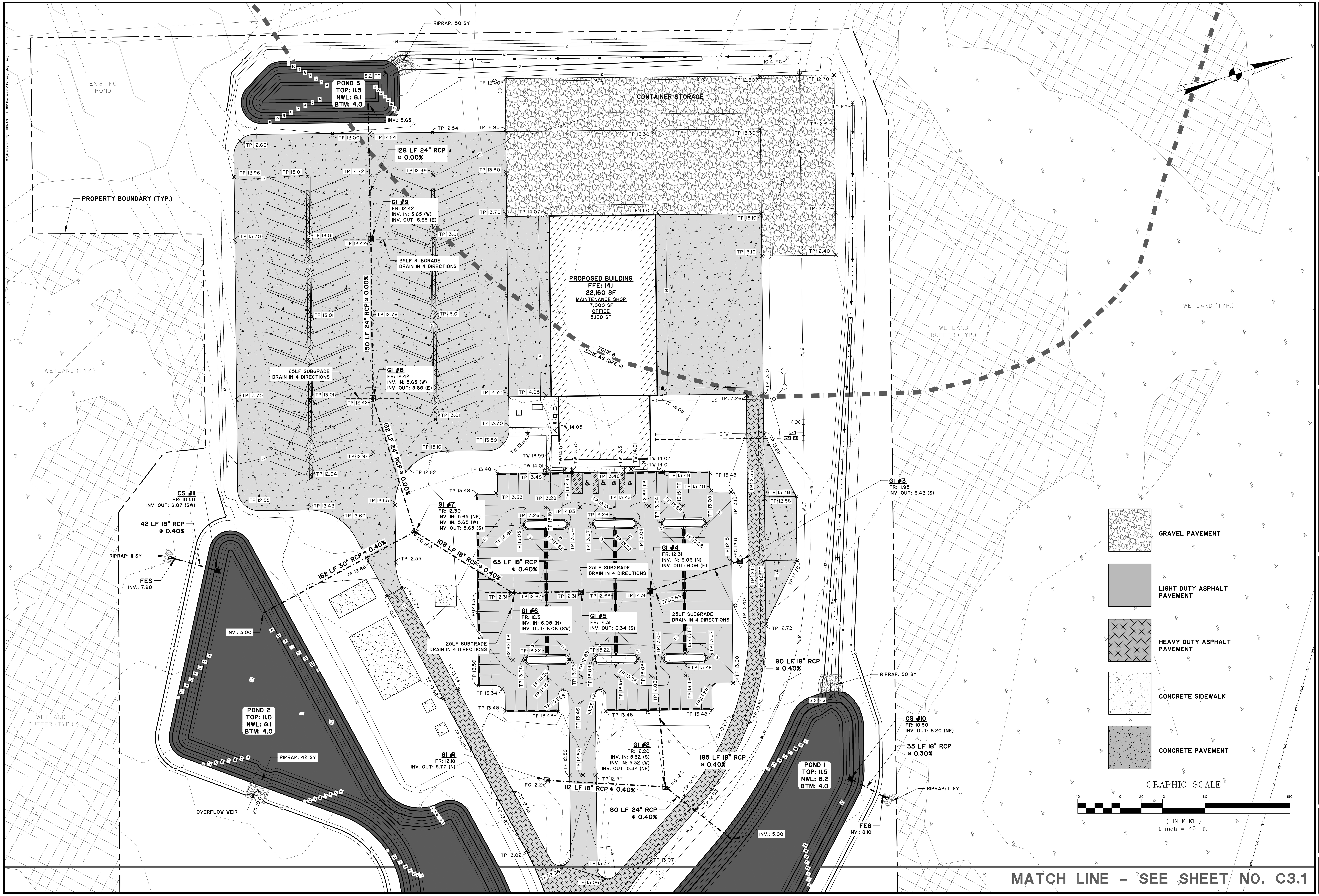
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

PAVING, GRADING, AND DRAINAGE PLAN

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

C3.1



SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED JASON O. CHAMBLESS

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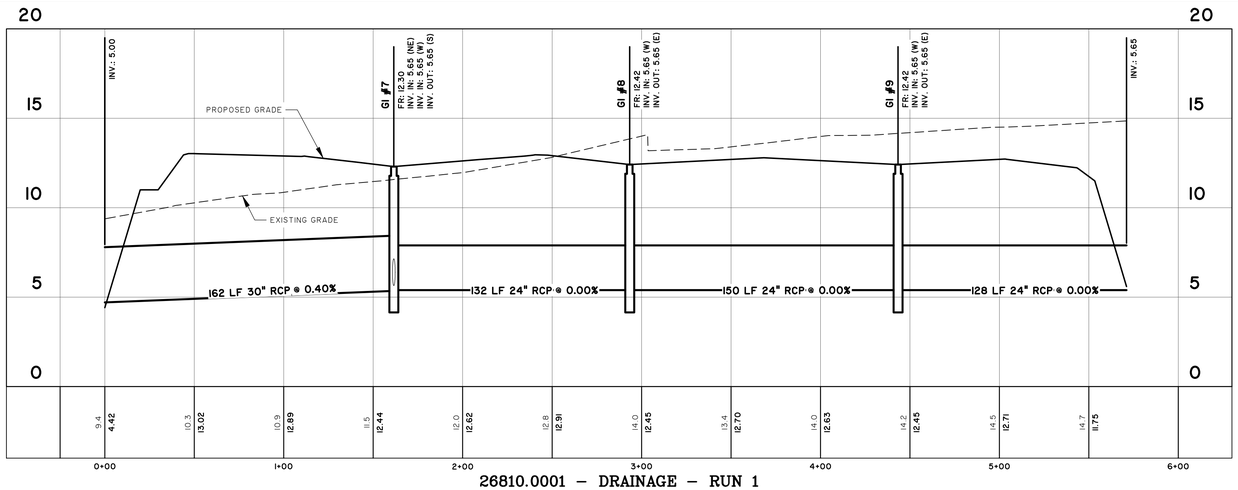
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

PAVING, GRADING, AND DRAINAGE PLAN

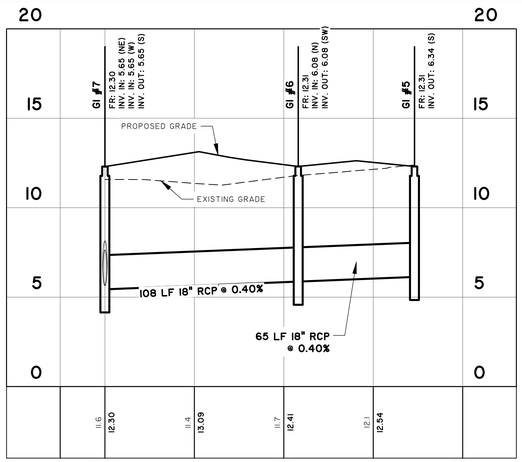
JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

C3.2



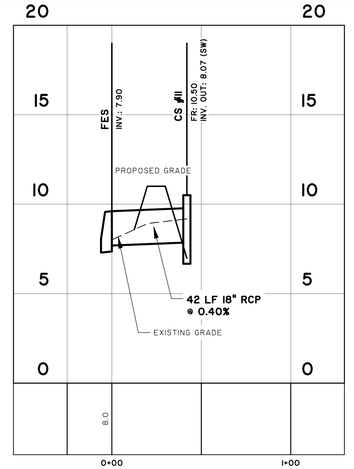
26810.0001 – DRAINAGE – RUN 1

STATIONS: −0+25 – 6+00
SCALE: HORZ.: 1" = 40'
VERT.: 1" = 4'



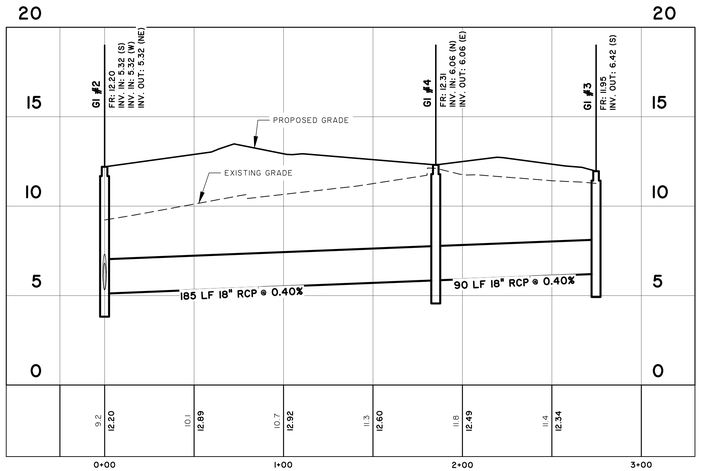
26810.0001 – DRAINAGE – RUN 2

STATIONS: −0+25 – 2+00
SCALE: HORZ.: 1" = 40'
VERT.: 1" = 4'



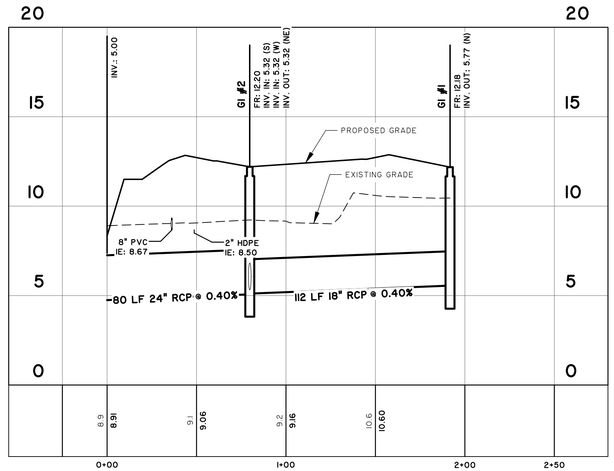
26810.0001 – DRAINAGE – RUN 6

STATIONS: −0+25 – 1+00
SCALE: HORZ.: 1" = 40'
VERT.: 1" = 4'



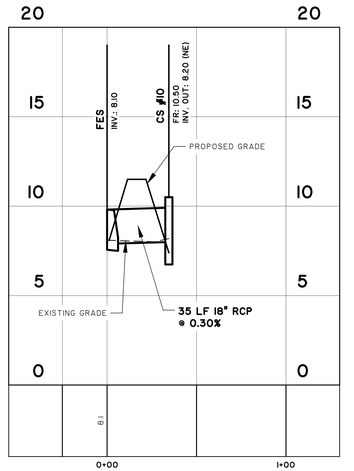
26810.0001 – DRAINAGE – RUN 3

STATIONS: −0+25 – 3+00
SCALE: HORZ.: 1" = 40'
VERT.: 1" = 4'



26810.0001 – DRAINAGE – RUN 4

STATIONS: −0+25 – 2+50
SCALE: HORZ.: 1" = 40'
VERT.: 1" = 4'



26810.0001 – DRAINAGE – RUN 5

STATIONS: −0+25 – 1+00
SCALE: HORZ.: 1" = 40'
VERT.: 1" = 4'

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

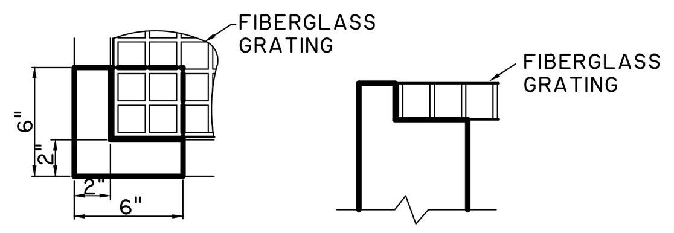
DRAINAGE PROFILES

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

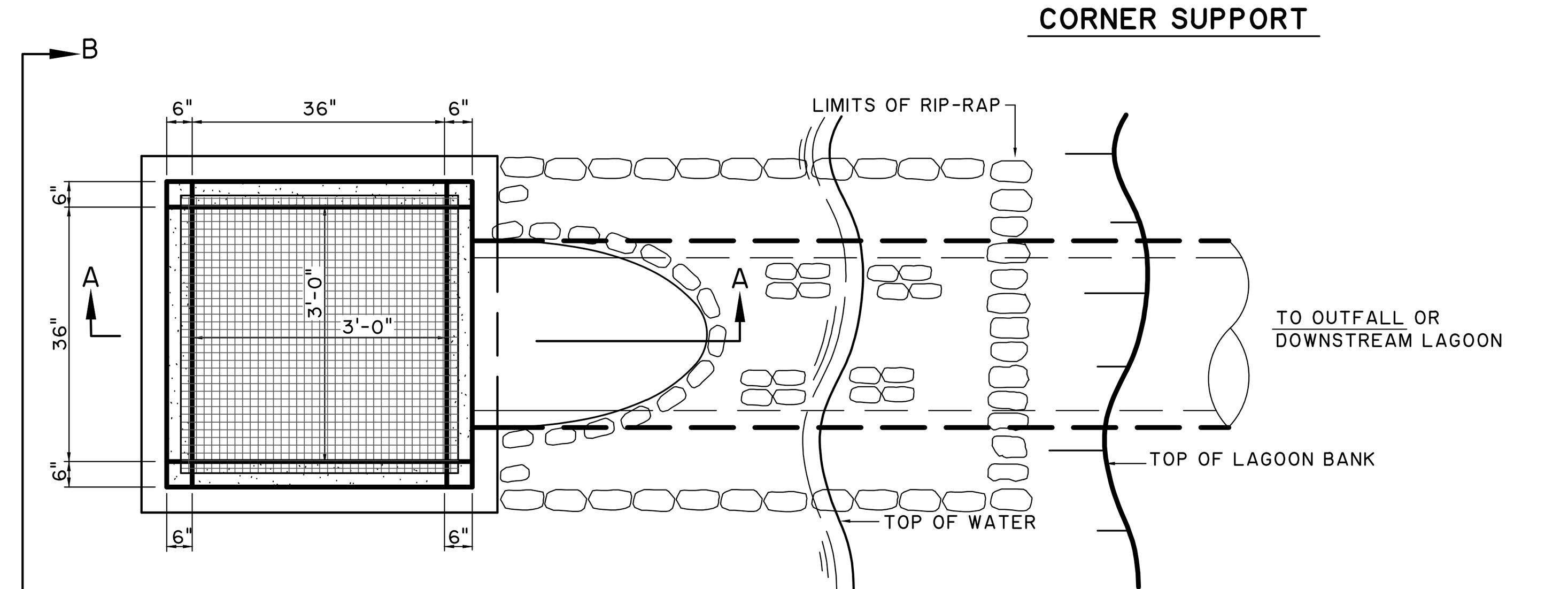
C3.3

LAGOON CONTROL STRUCTURE DETAIL

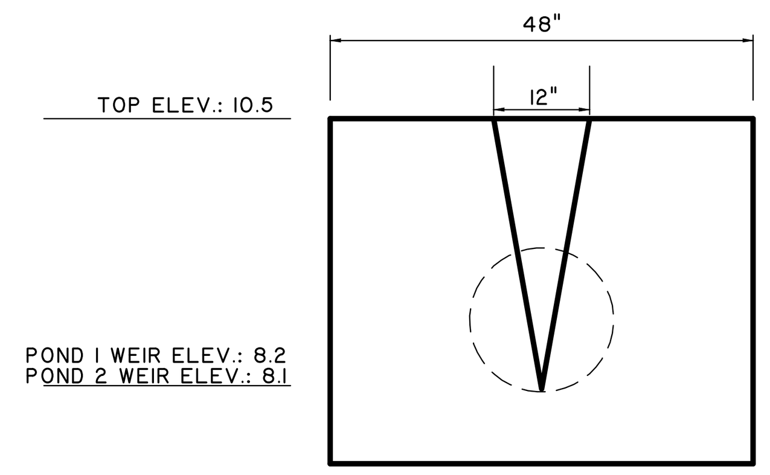
NOTE:
1. RIP-RAP TO BE INCLUDED IN PRICE OF STRUCTURE.
2. OUTFALL PIPE TO BE PAID SEPARATELY.



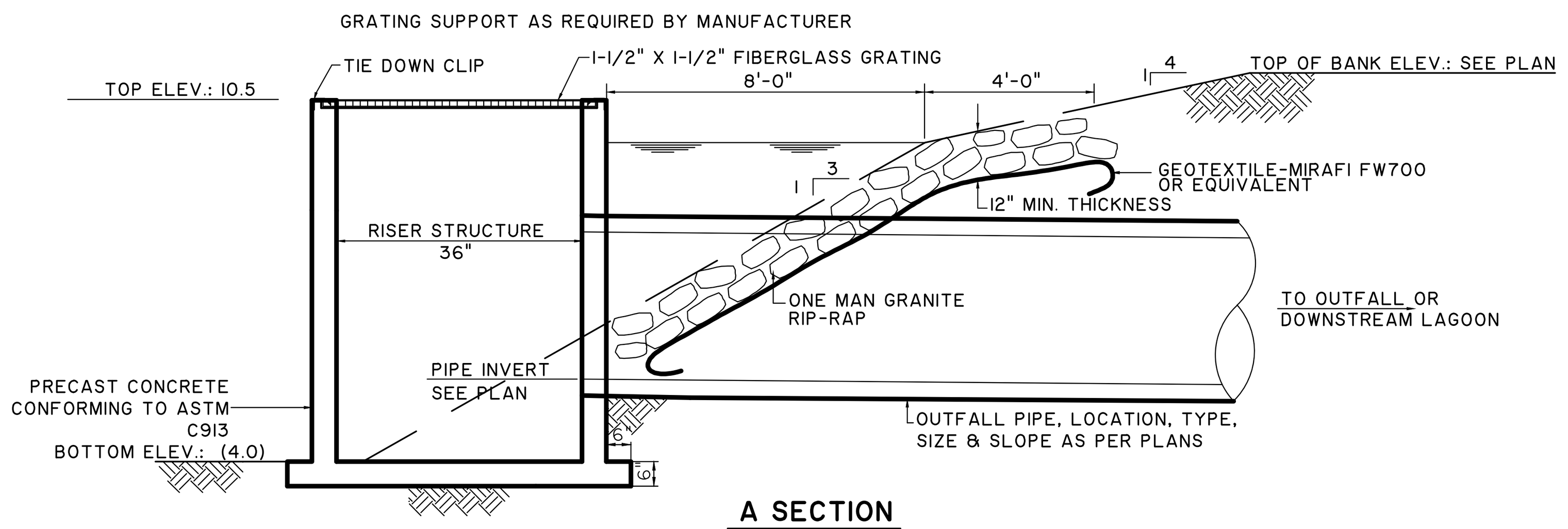
CORNER SUPPORT



PLAN



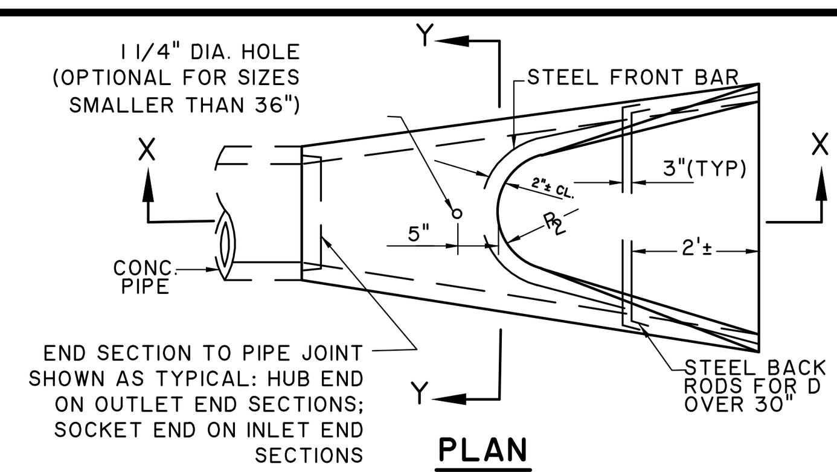
B SECTION



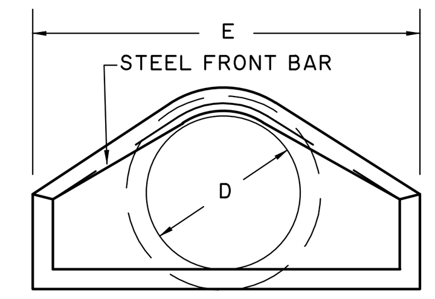
A SECTION

NOTE:
THE PRECAST MANUFACTURER IS TO PREPARE AND SUBMIT TO THE ENGINEER DESIGN DETAILS AND CALCULATIONS FOR THE STRUCTURE SHOWN BASED ON THE DESIGN CRITERIA SPECIFIED. THE DESIGN SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA EXPERIENCED IN THE DESIGN OF PRECAST CONCRETE. THE DESIGN SHALL INCLUDE PROVISIONS FOR HANDLING STRESSES AND CONSTRUCTION LOADS. REPRODUCED COPIES OF ASTM C1433 "STANDARD SPECIFICATION FOR PRECAST REINFORCED CONCRETE MONOLITHIC BOX SECTIONS FOR CULVERTS, STORM DRAINS AND SEWERS" WILL NOT BE ACCEPTED AS A SUBSTITUTE FOR DESIGN.

LAGOON CONTROL STRUCTURE DETAIL
NOT TO SCALE

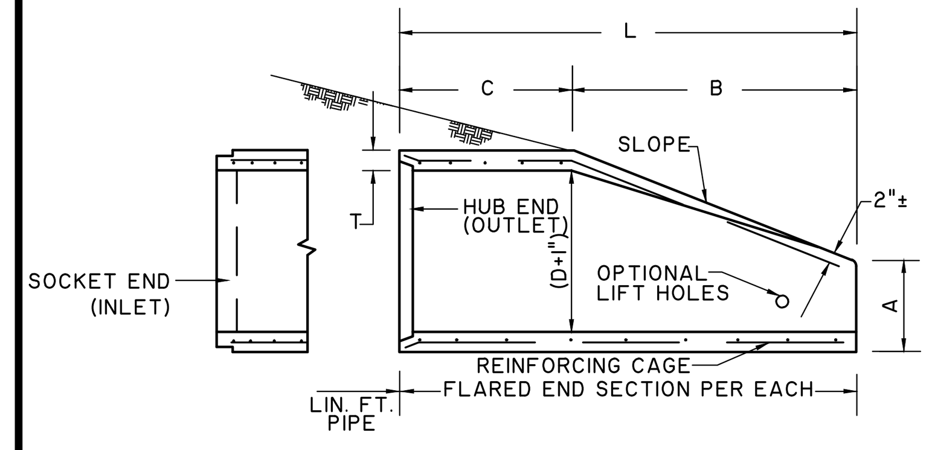


PLAN

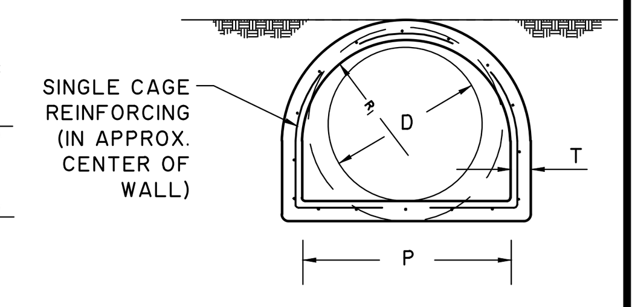


FRONT

NOTE:
DO NOT CUT CONCRETE PIPE. USE FULL LENGTH END SECTIONS ONLY. WARP SLOPE TO CONFORM WITH PIPE LENGTH AND END SECTION.



SECTION X-X



SECTION Y-Y

DIMENSIONS AND REINFORCING FOR CONCRETE FLARED END SECTIONS (± 1" TOLERANCE)

PIPE DIA.	FRONT BAR	BACK RODS	SLOPE	A	B	C	L	E	P	R	R
12"	1-#3x5'-4"	NOT REQ'D.	2.2:1	4"	2'-0"	4'-1"	6'-1"	2'-0"	1'-8"	10"	9"
15"	1-#3x6'-0"	NOT REQ'D.	2.2:1	6"	2'-3"	3'-10"	6'-1"	2'-6"	2'-0"	1'-0"	11"
18"	1-#3x7'-2"	NOT REQ'D.	2.2:1	9"	2'-3"	3'-10"	6'-1"	3'-0"	2'-6"	1'-4"	1'-0"
24"	1-#3x9'-10"	NOT REQ'D.	2.4:1	10"	3'-8"	2'-6"	6'-2"	4'-0"	2'-9"	1'-5"	1'-2"
30"	1-#4x11'-8"	NOT REQ'D.	2.4:1	12"	4'-6"	1'-8"	6'-2"	5'-0"	3'-1"	1'-6"	1'-3"
36"	1-#4x13'-10"	2'#4x6'-3"	2.4:1	15"	5'-3"	2'-11"	8'-2"	6'-0"	4'-0"	2'-0"	1'-8"
42"	1-#4x13'-10"	2-#4x7'-4"	2.4:1	21"	5'-3"	2'-11"	8'-2"	6'-6"	4'-6"	2'-4"	1'-10"

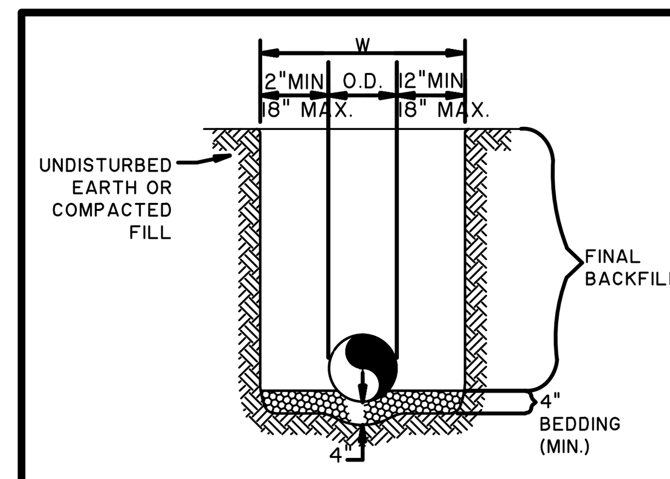
NOTE:
SPECIFIED REINFORCING IS MINIMAL AND MAY BE INCREASED AT PRODUCERS OPTION TO AID CASTING & HANDLING. ALTERNATE REINFORCEMENT PERMITTED IF ACCEPTABLE TO ENGINEER.

REINFORCING CAGE:
1. WIRE FABRIC HAVING SAME STEEL AREA AS INNER CAGE FOR CL. III PIPE, AASHTO M-170, BUT PLACED IN CENTER OF WALL.

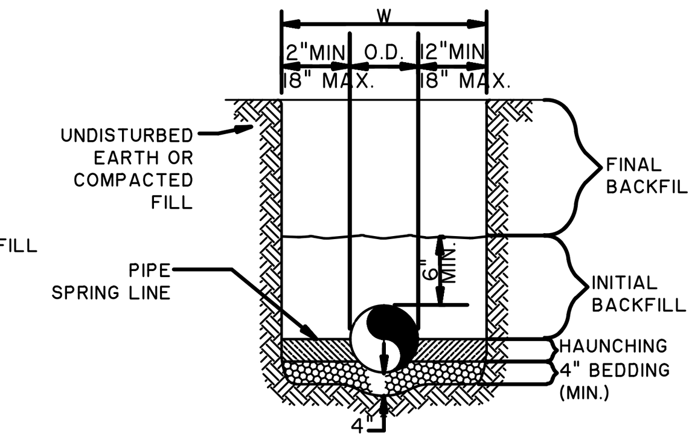
2. ALTERNATE: #3 BARS SPACED 12"± LONGITUDINALLY WITH #2 BARS TRANSVERSELY AT 6" O.C. MAX. SPACING, SPOT WELDED OR TIED TO FORM CAGE.

NOTE:
CONTRACTOR WILL INFORM PRODUCER IF CONCRETE FLARED END SECTION IS FOR INLET OR FOR OUTLET END. SOCKET (TONGUE OR SPIGOT) END IS REQUIRED FOR INLETS. HUB (GROOVE OR BELL) END IS REQUIRED FOR OUTLETS. SOCKET TO SOCKET OR HUB TO HUB JOINT WILL NOT BE ACCEPTED UNLESS A REINFORCED CONCRETE COLLAR IS BUILT AROUND THE JOINT WITH NO PAYMENT BEING MADE FOR THE COLLAR. FLARED END SECTIONS SHALL BE JOINTED TO PIPE WITH ALL SPACE IN THE JOINT FILLED WITH PREFORMED PLASTIC GASKET (SEC.848). WALL THICKNESS (T) IS SHOWN AS NOMINAL AND MAY BE INCREASED AT PRODUCERS OPTION FOR DESIRED JOINT DESIGN OR TO ALLOW A FLAT OUTSIDE BOTTOM ON THE FLARE, WITH INSIDE DIMENSIONS OF FLARE RETAINED AS SHOWN.
T = PIPE WALL THICKNESS (0.08330+1"± TYPICAL).

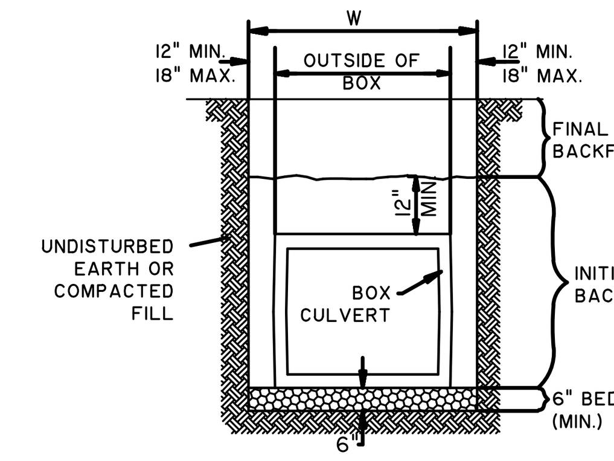
CONCRETE FLARED END SECTION
NOT TO SCALE



REINFORCED CONCRETE PIPE (RCP) AND SPIRAL RIB PIPE SMALLER THAN 60"ø
NOT TO SCALE



ALL OTHER PIPES INCLUDING SPIRAL RIB PIPE 60"ø AND LARGER
NOT TO SCALE



CONCRETE BOX CULVERT
NOT TO SCALE

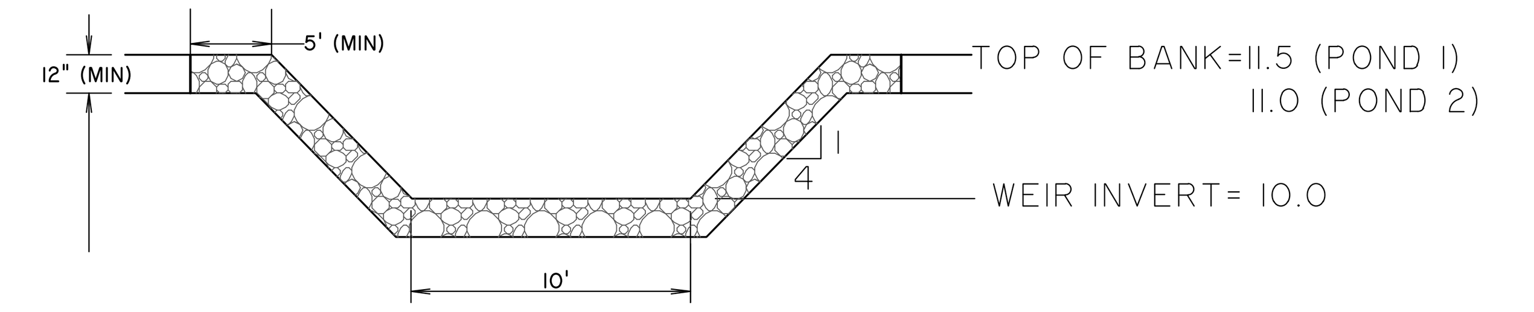
GENERAL NOTES

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.

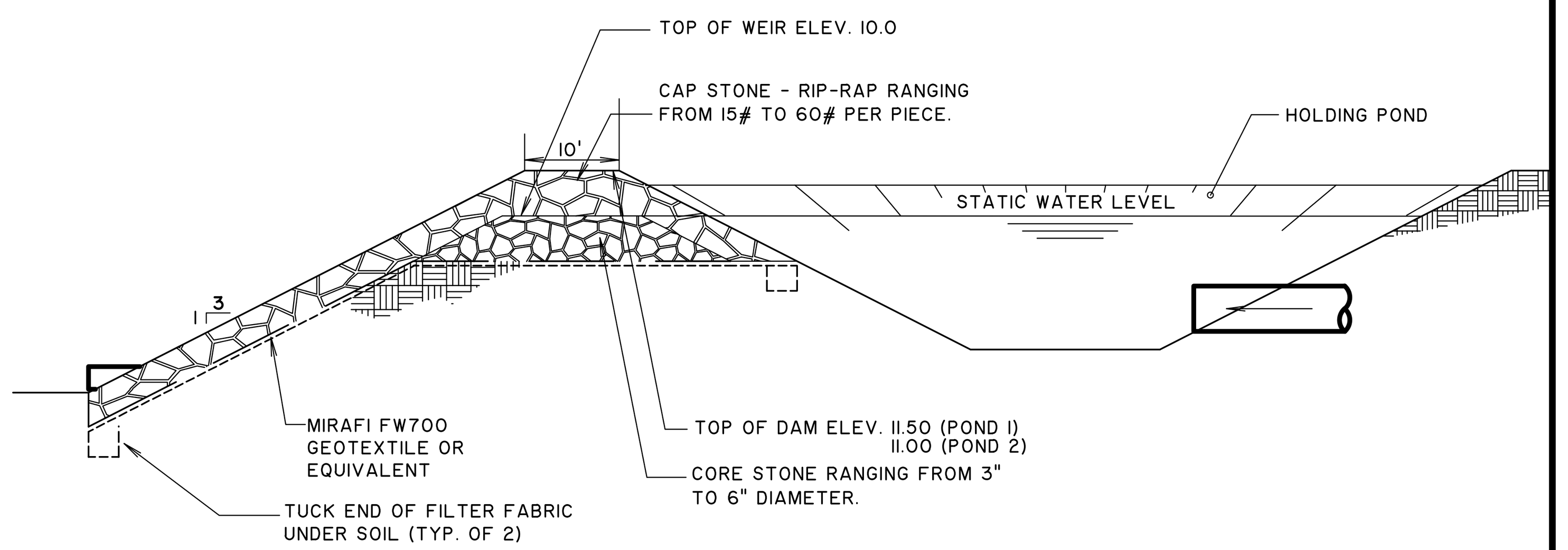
GENERAL NOTES- CONTINUED

4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3 AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-LATEST EDITION.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

STORM SEWER TRENCH AND BEDDING
NOT TO SCALE

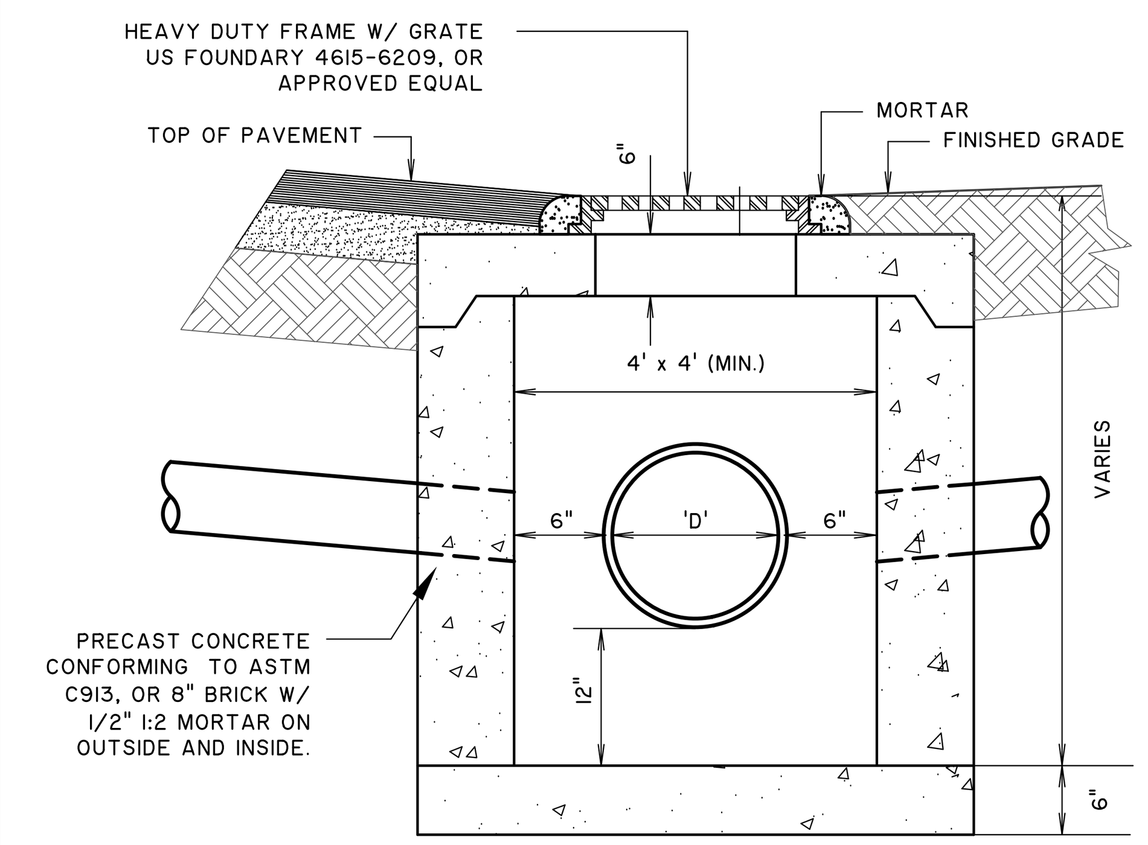


WEIR CROSS SECTION

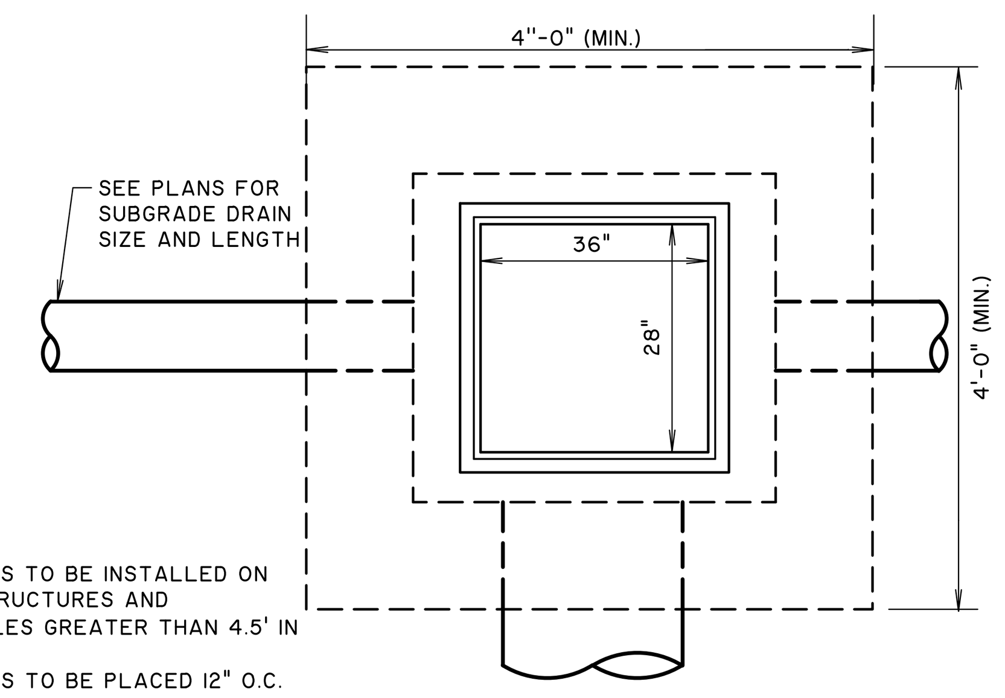


D29
OCT. 2008
THOMAS & HUTTON ENGINEERING CO.

OVERFLOW WEIR DETAIL
NOT TO SCALE



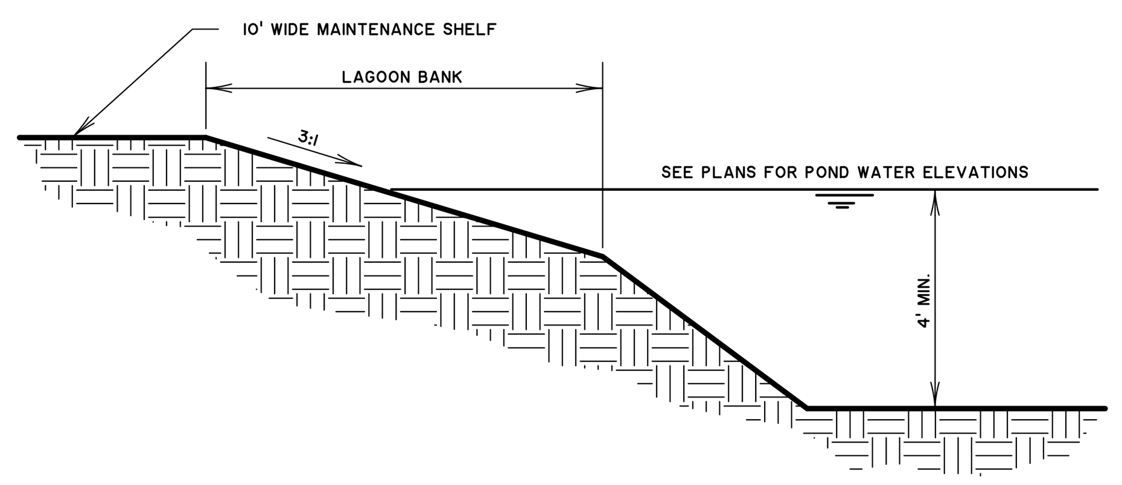
SECTION



NOTES:
1. STEPS TO BE INSTALLED ON ALL STRUCTURES AND MANHOLES GREATER THAN 4.5' IN DEPTH.
2. STEPS TO BE PLACED 12" O.C.

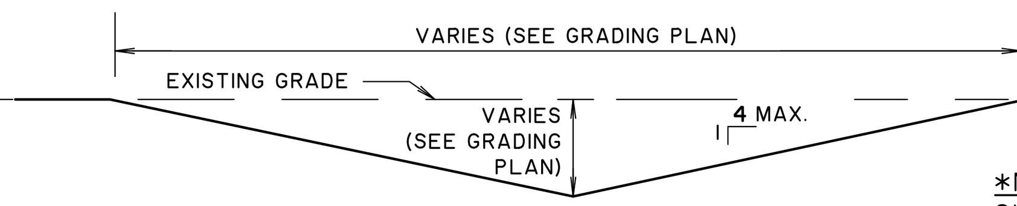
PLAN

STANDARD INLET - GRATE TYPE
NOT TO SCALE



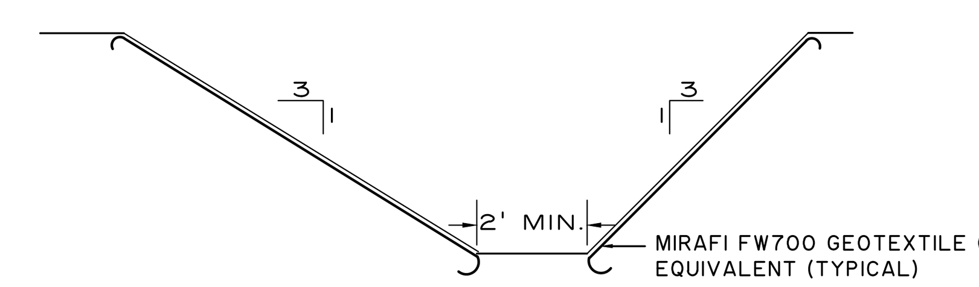
A PERMANENT STAND OF GRASS MUST BE MAINTAINED ON ALL PONDS (TOPS, SLOPES AND BOTTOMS

POND BANK DETAIL
NOT TO SCALE

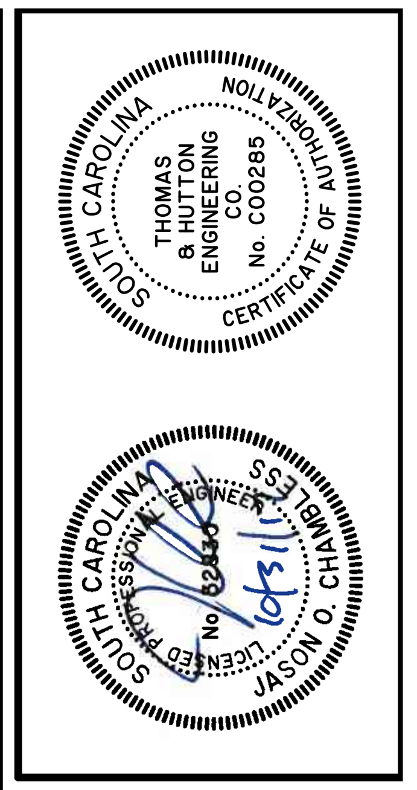


*NOTE
SWALE SIDE SLOPES SHALL BE 4:1 OR FLATTTER

TYPICAL SWALE DETAIL
NOT TO SCALE



TYPICAL DITCH SECTION
NOT TO SCALE



PERMIT SET - FOR REVIEW PURPOSES ONLY

NO	REVISIONS	BY	DATE

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50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
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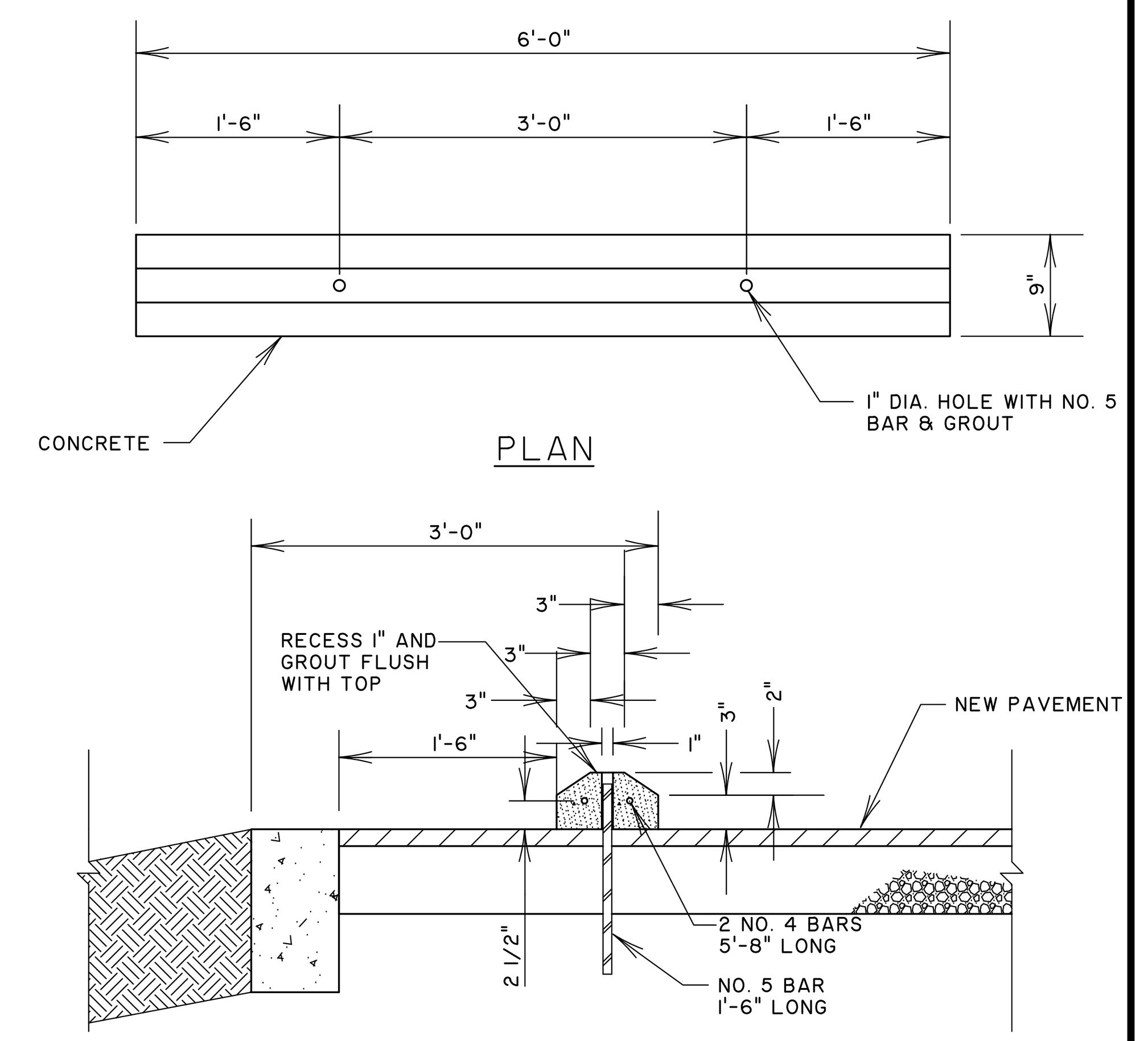
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA
HARDEEVILLE HAULING FACILITY
DRAINAGE DETAILS

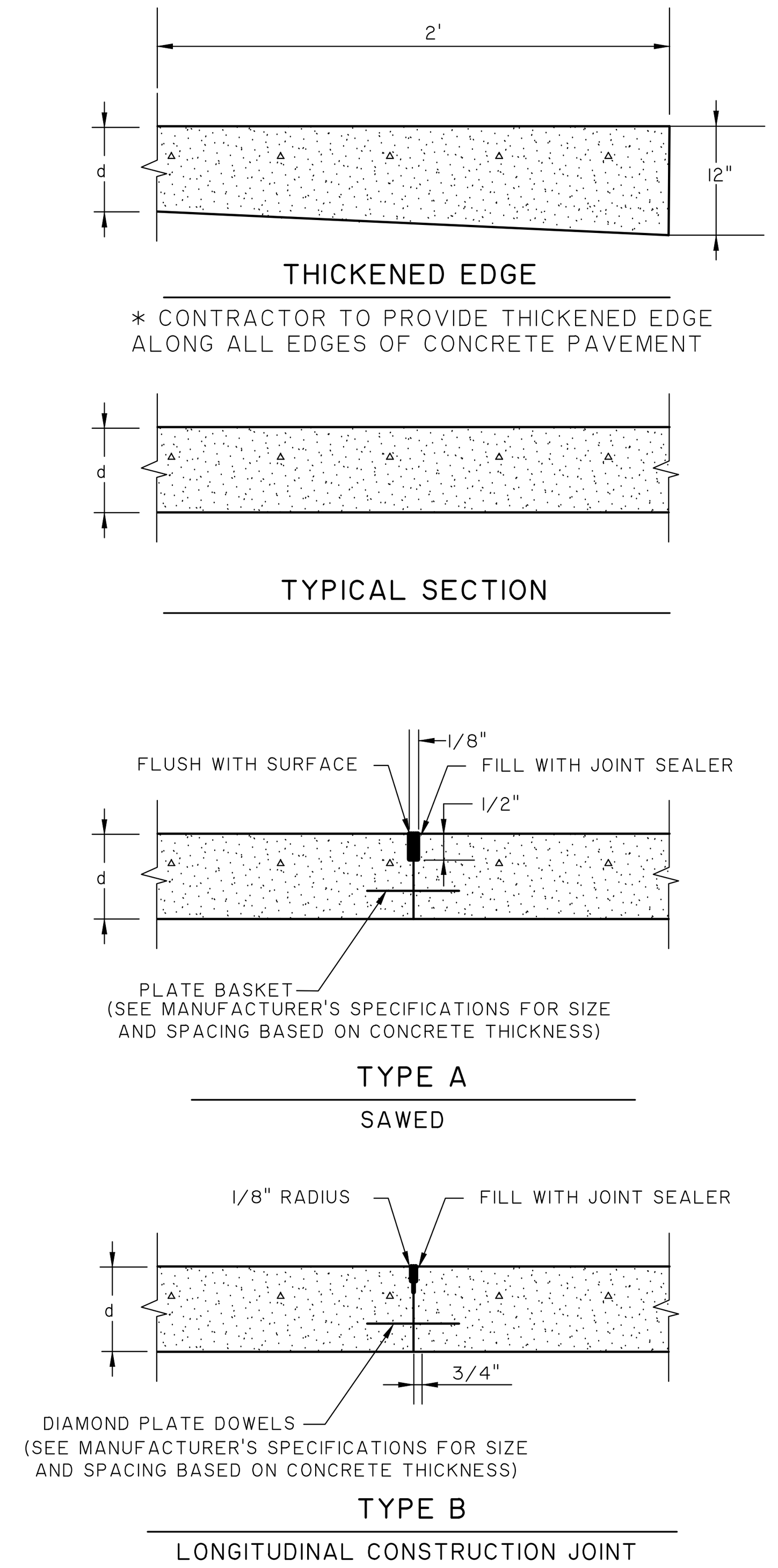
JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 1'

C3.4



WHEEL STOP DETAIL

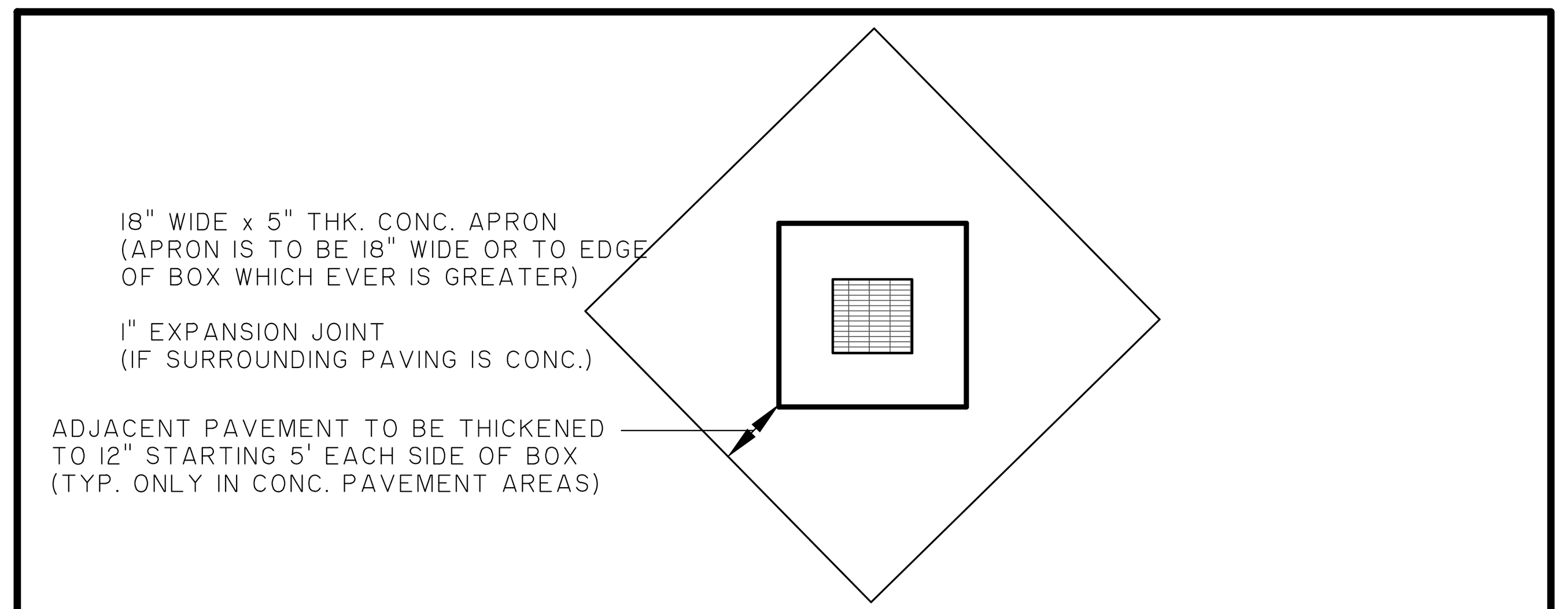
NOT TO SCALE



NOTES:
1. CONTRACTOR SHALL PROVIDE SAW JOINT PLAN TO ENGINEER FOR APPROVAL.
2. WHEN A JOINT FALLS WITHIN 5' OF OR CONTACTS BASINS, MANHOLES, OR OTHER STRUCTURES, SHORTEN ONE OR MORE PANELS EITHER SIDE OF OPENING TO PERMIT JOINT TO FALL ON ROUND STRUCTURES AND AT OR BETWEEN CORNERS OF RECTANGULAR STRUCTURES.
3. ALL TRANSVERSE JOINTS MUST EXTEND THROUGH CURBS AND MUST BE CONTINUOUS ACROSS PAVEMENT, EXCEPT TIED TRANSVERSE CONSTRUCTION JOINTS. EXPANSION JOINTS WILL NOT BE REQUIRED EXCEPT AT STRUCTURES OR AS SHOWN ON THE PLANS.

CONCRETE JOINT DETAILS

NOT TO SCALE



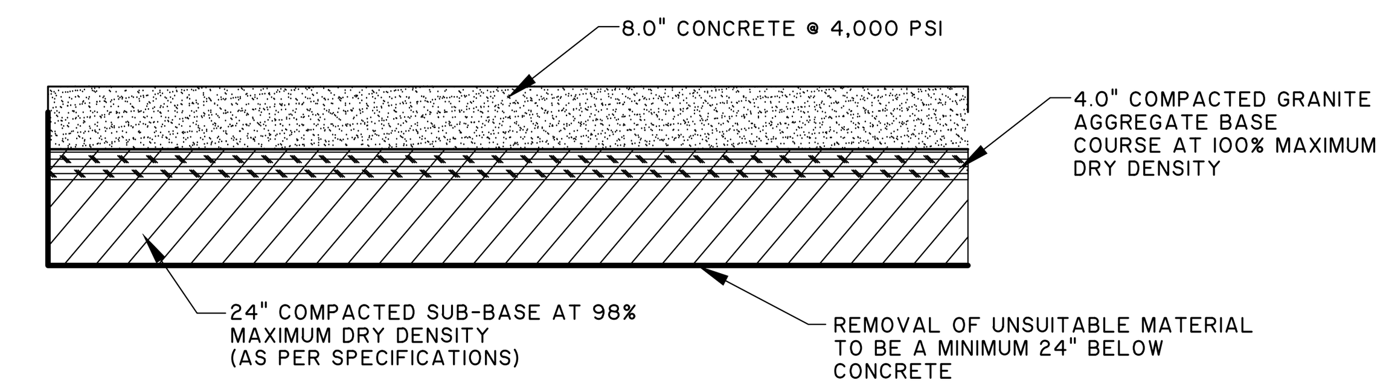
1. ALL CATCH BASINS SHALL BE SEPARATED FROM THE PAVEMENT AND CURB BY BOXING OUT AROUND BASIN AS SHOWN ABOVE. EXPANSION JOINT MATERIAL SHALL RUN COMPLETELY THROUGH CURB AND SLAB. MANHOLE CASTINGS WITHIN THE PAVEMENT SHALL BE BOXED IN LIKE MANNER EXCEPT WHEN TELESCOPING TYPE CASTINGS ARE USED.

2. THE MINIMUM CEMENT CONTENT SHALL NOT BE LESS THAN 6.0 SACKS (94 lb. PER SACK) PER cu. yd. OF CONCRETE. THE MAXIMUM SIZE AGGREGATE SHALL NOT EXCEED 1/4 OF THE SLAB THICKNESS. THE MAXIMUM SLUMP SHALL NOT EXCEED 3". ALL CONCRETE SHALL BE AIR ENTRAINED IN ACCORDANCE WITH THE FOLLOWING TABLE:

MAX. SIZE OF COARSE AGGREGATE, INCHES	AIR CONTENT, PER CENT BY VOLUME
1-1/2 , 2	5 ± 1
3/4 , 1	6 ± 1
3/8 ,1/2	7-1/2 ± 1

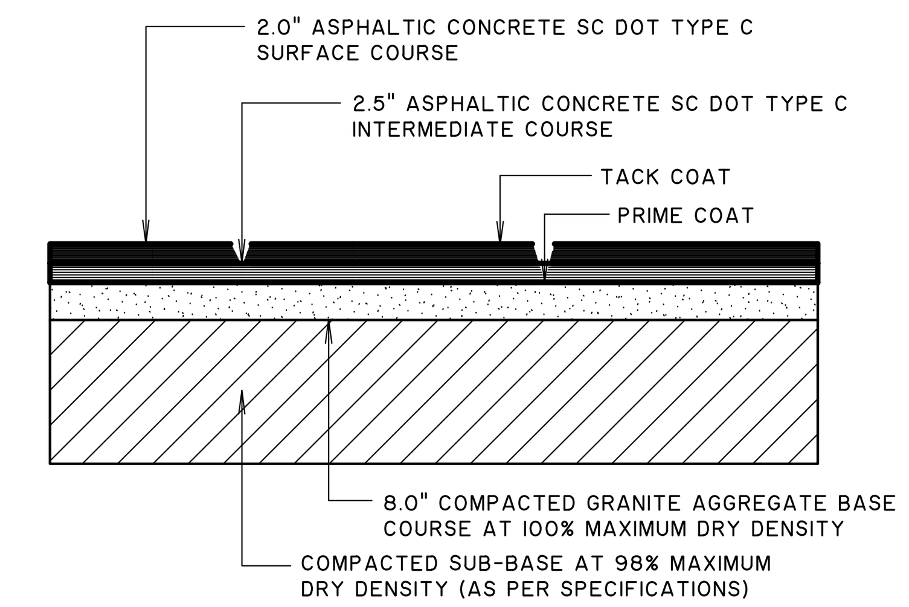
GRATE INLET IN CONCRETE PAVEMENT

NOT TO SCALE



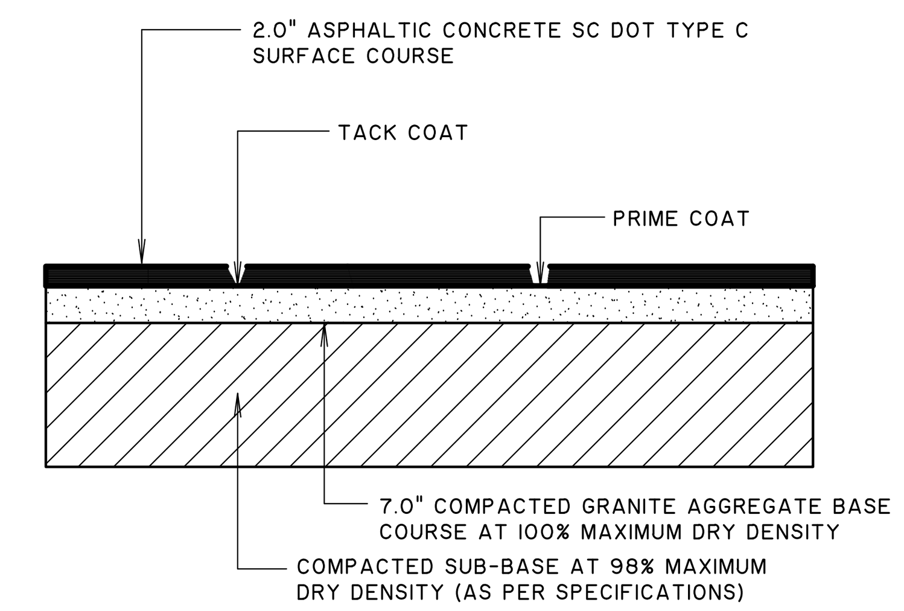
CONCRETE PAVEMENT SECTION

NOT TO SCALE
PER TERRACON'S GEOTECHNICAL REPORT
SEPTEMBER 7, 2017



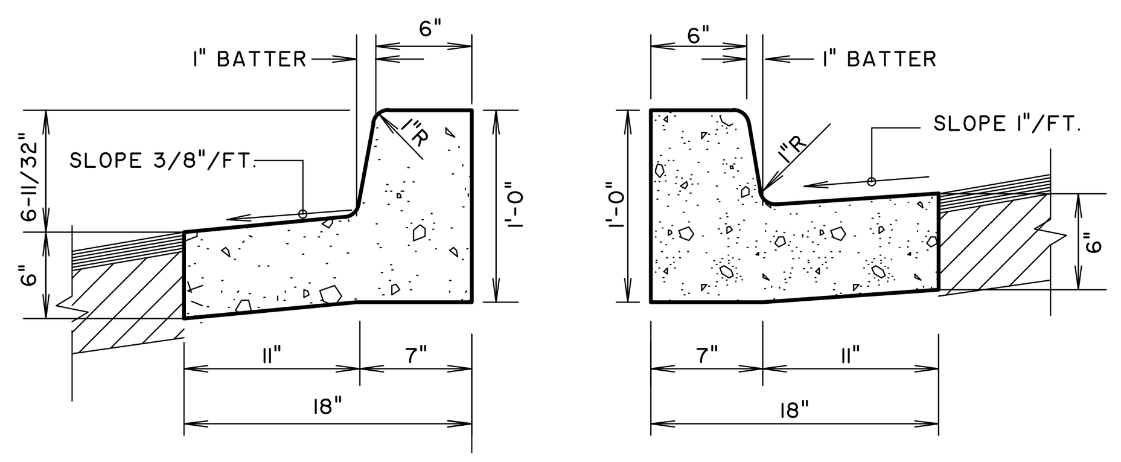
HEAVY PAVEMENT SECTION

NOT TO SCALE
PER TERRACON'S GEOTECHNICAL REPORT
SEPTEMBER 7, 2017



LIGHT PAVEMENT SECTION

NOT TO SCALE
PER TERRACON'S GEOTECHNICAL REPORT
SEPTEMBER 7, 2017



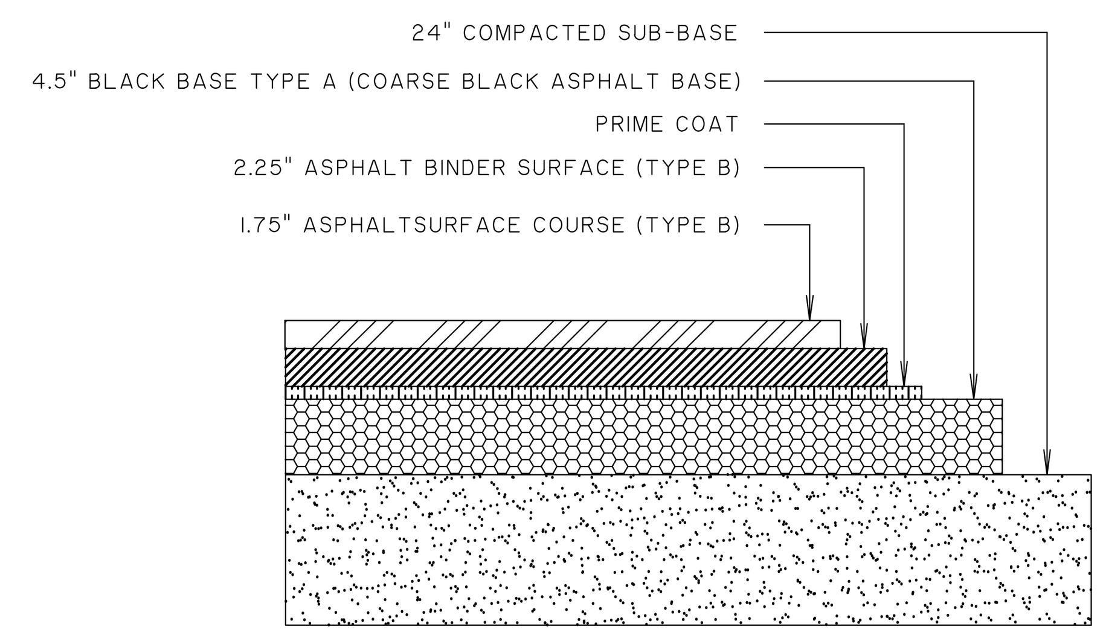
PITCH CURB

NORMAL CURB

NOTES:
1. ALL CONCRETE SHALL BE 3,000 PSI.
2. PROVIDE CONTROL JOINTS EVERY TEN FEET (10').
3. PROVIDE EXPANSION JOINTS EVERY FIFTY FEET (50).
4. PROVIDE EXPANSION JOINT WHERE CURB ABUTS SIDEWALKS, OR OTHER STRUCTURES.
5. PROVIDE LIGHT BROOM FINISH.

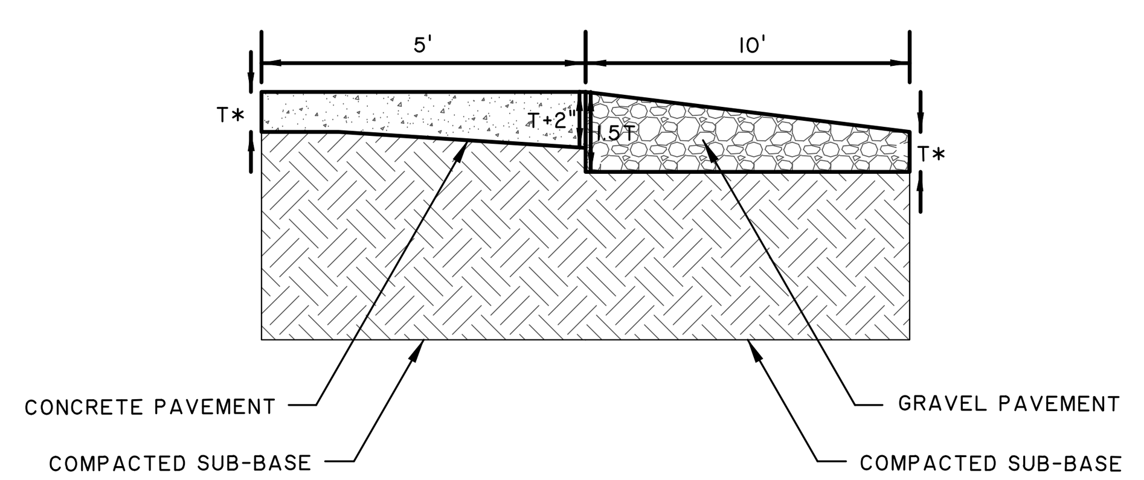
18" STANDARD CURB & GUTTER

NOT TO SCALE



SCDOT HEAVY-DUTY PAVEMENT DETAIL

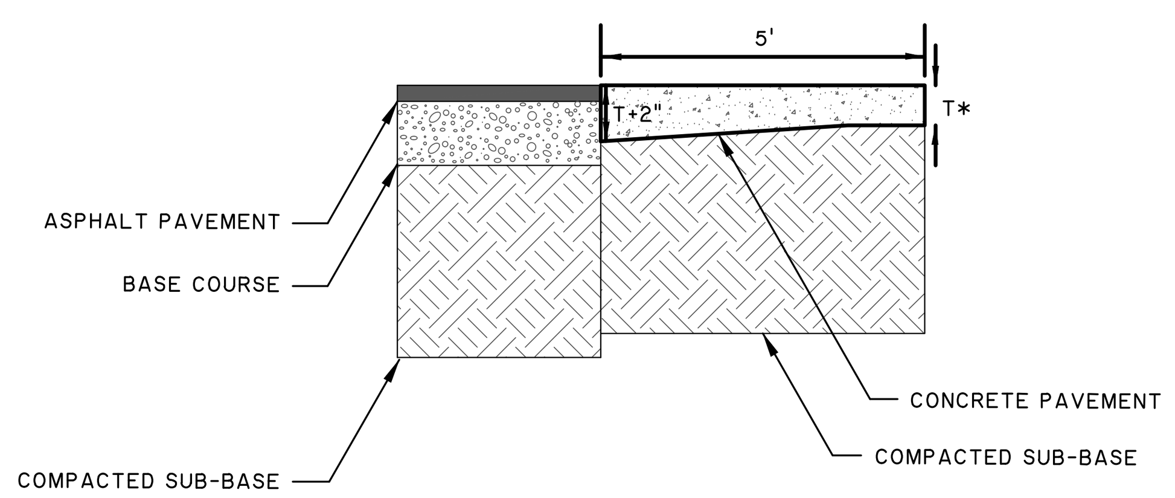
NOT TO SCALE



CONCRETE - GRAVEL TRANSITION DETAIL

NOT TO SCALE

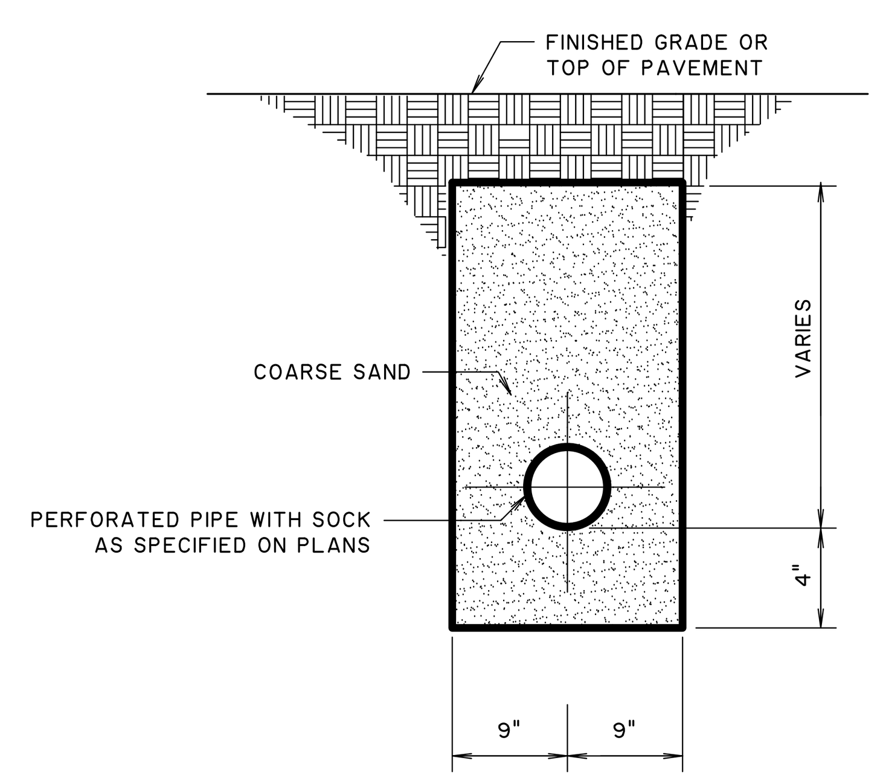
NOTE:
REFER TO PAVEMENT SECTION DETAIL FOR THICKNESS (T*) OF PAVEMENTS



CONCRETE-ASPHALT TRANSITION DETAIL

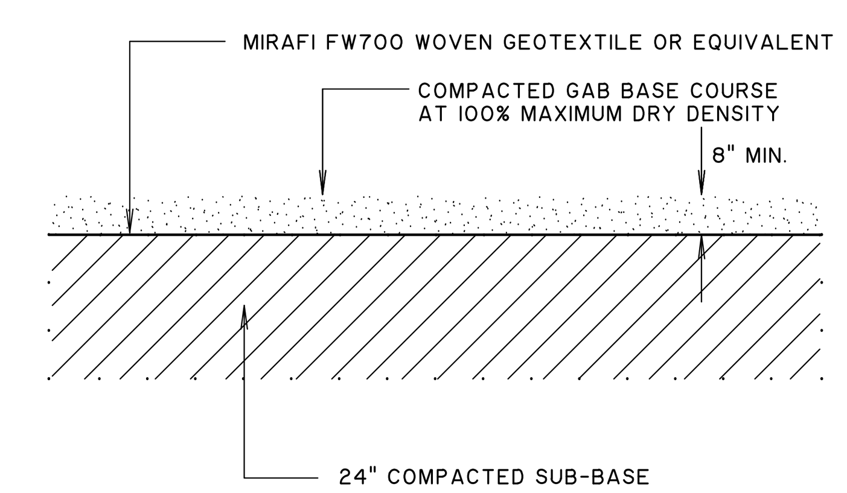
NOT TO SCALE

NOTE:
REFER TO PAVEMENT SECTION DETAIL FOR THICKNESS (T*) OF CONCRETE PAVEMENT



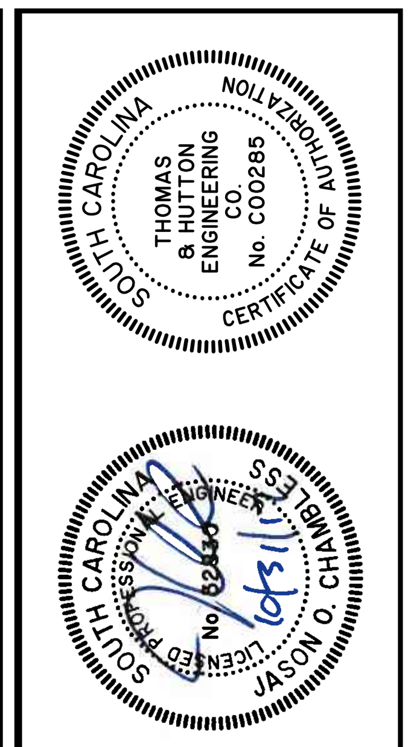
SUBGRADE DRAIN DETAIL

NOT TO SCALE



GRAVEL PAVEMENT SECTION

NOT TO SCALE



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NO	REVISIONS	BY	DATE

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50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

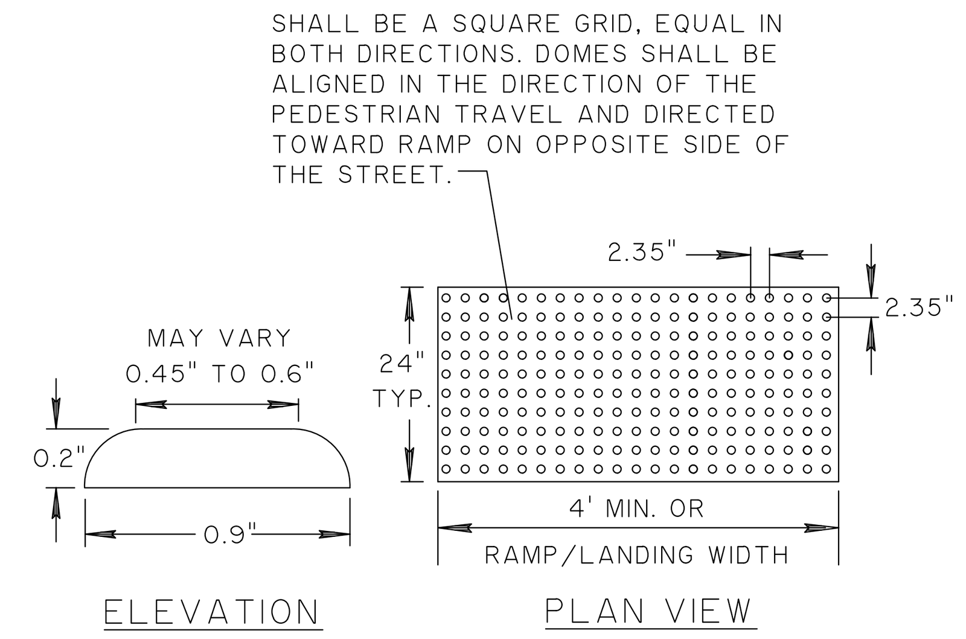
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

PAVING AND GRADING DETAILS

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 1'

C3.5



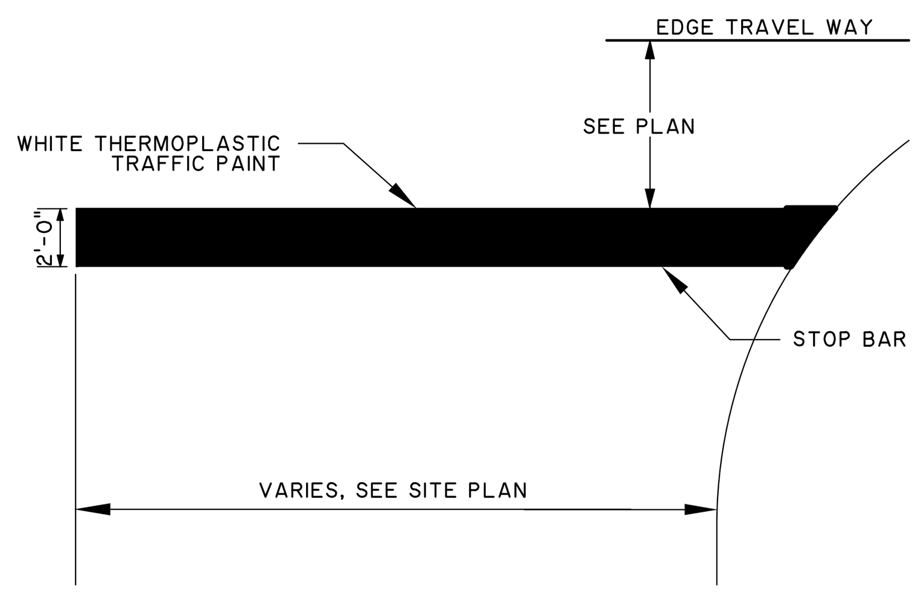
NOTE:

1. DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF CONCRETE, THE WARNING AREA SHALL BE RED BRICK IN COLOR. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF RED BRICK, THE WARNING AREA SHALL BE GRAY IN COLOR. THE COLOR USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.

2. BRICK PAVERS SHALL BE SET IN A WET MORTAR BED ON A 4" MIN. THICK CONCRETE FOUNDATION.

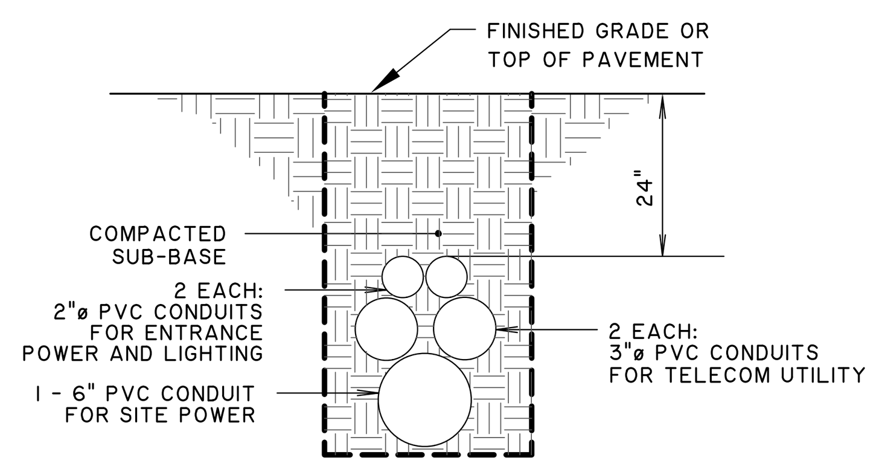
DETECTABLE WARNING DETAIL

NOT TO SCALE



TYPICAL STOP BAR PAVEMENT MARKING DETAIL

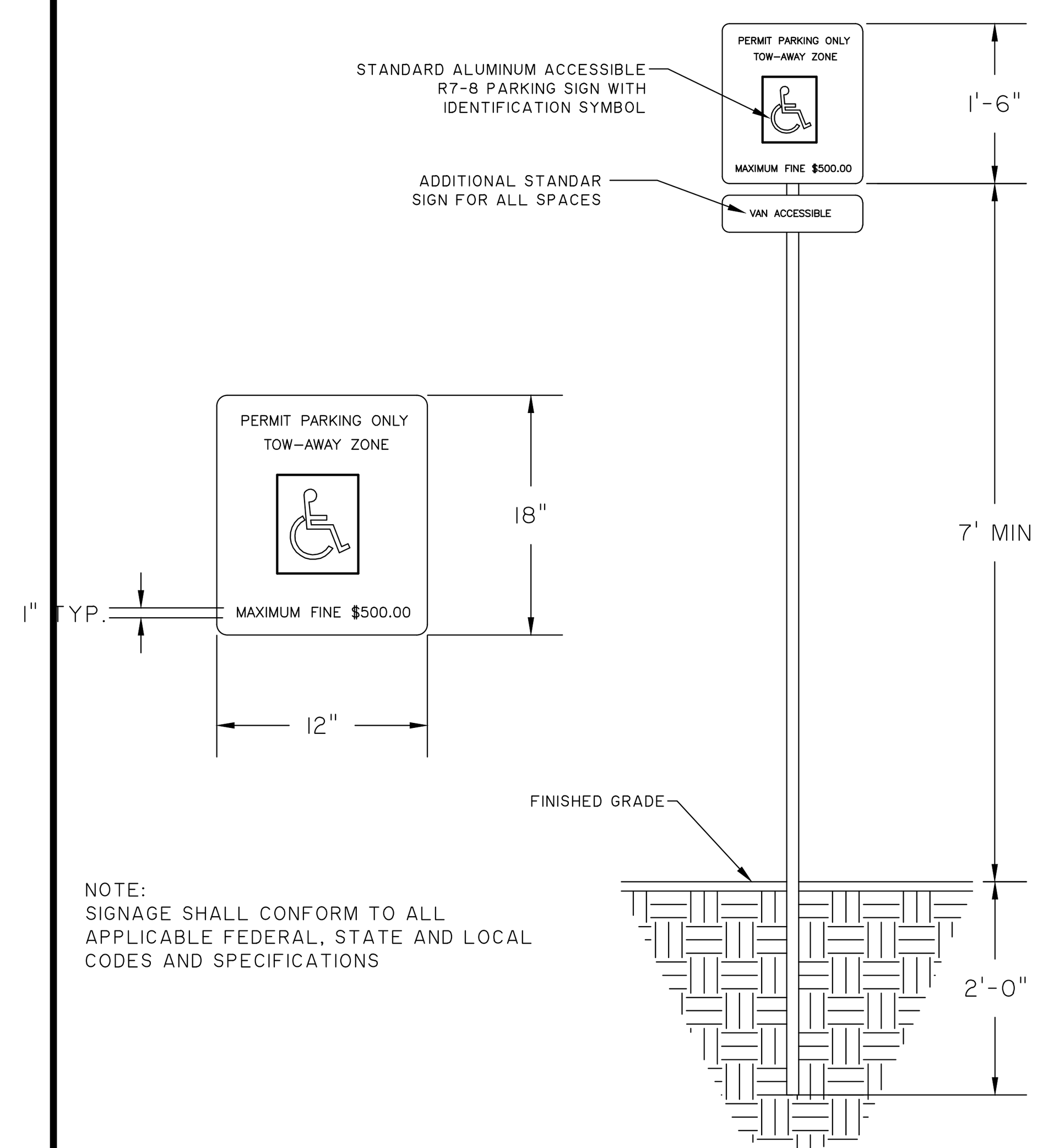
NOT TO SCALE



NOTE: PULL BOXES FOR CONDUIT BANK SHALL BE LOCATED AT A MAXIMUM SPACING OF 150'.

CONDUIT BANK DETAIL

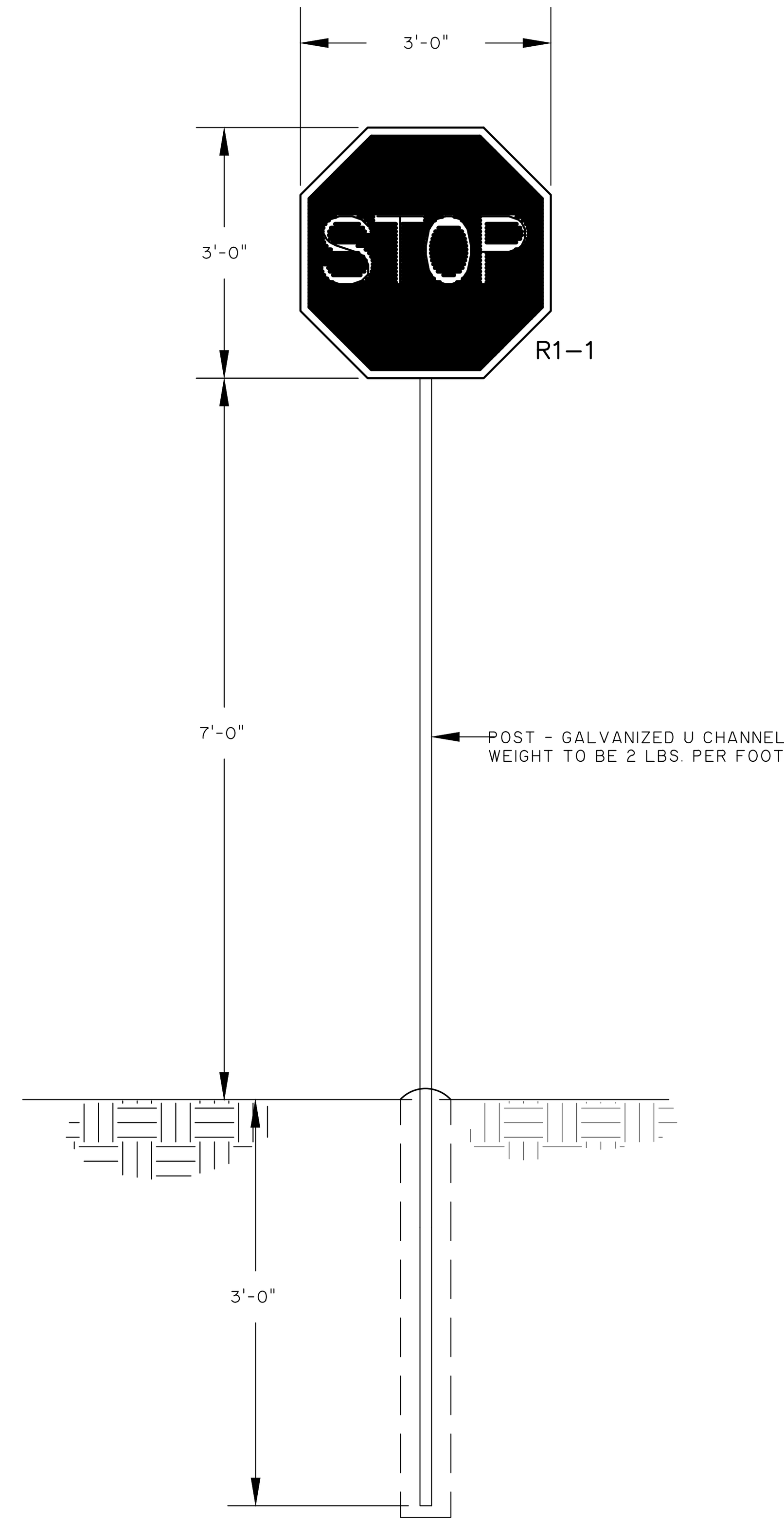
NOT TO SCALE



NOTE:
SIGNAGE SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND SPECIFICATIONS

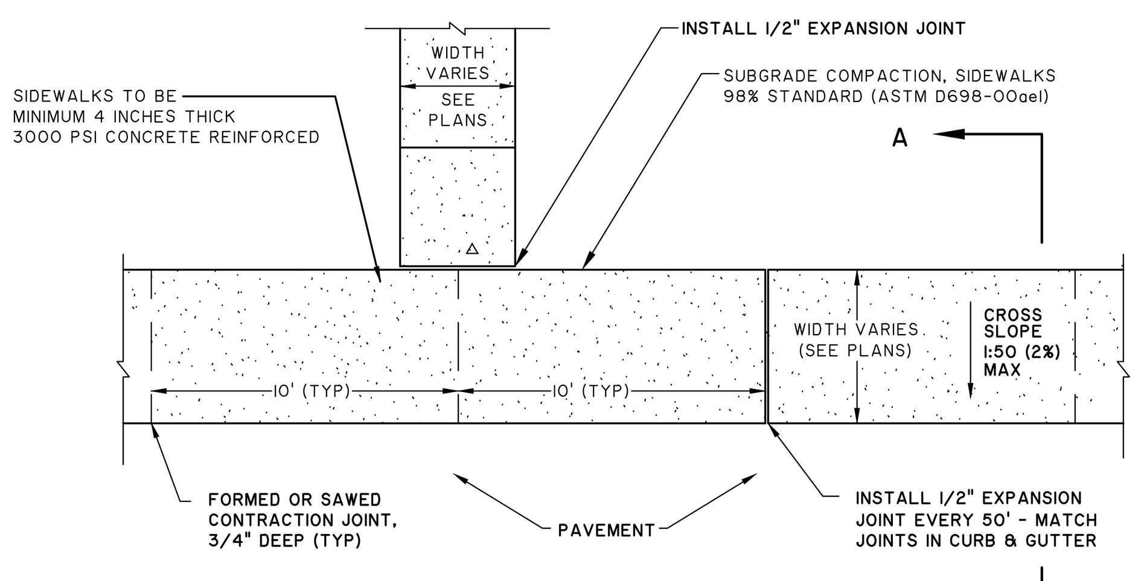
ACCESSIBLE PARKING SIGN DETAIL

NOT TO SCALE

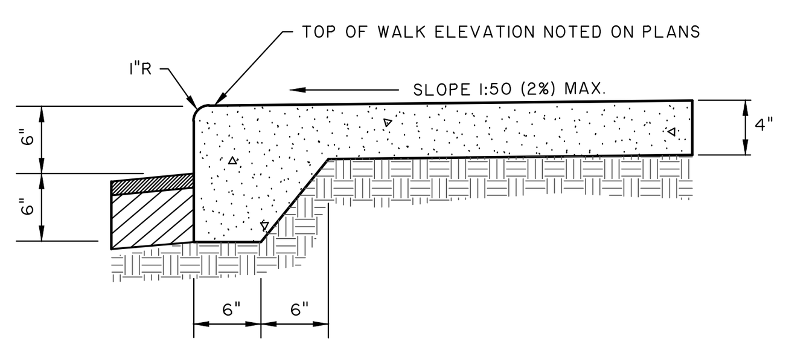


STOP SIGN DETAIL

NOT TO SCALE



NOTE:
LONGITUDINAL SLOPE OF SIDEWALK SHALL BE NO GREATER THAN 1:20 (5%)



SECTION A-A

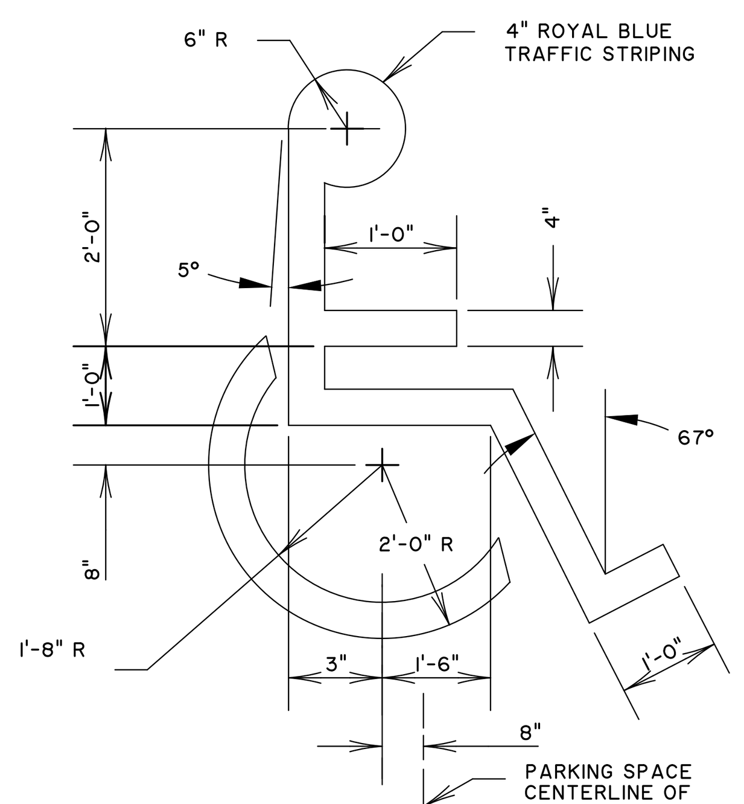
NOTES:
1. ALL CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND SPECIFICATIONS, AND TO THE TECHNICAL SPECIFICATIONS INCLUDING, BUT NOT LIMITED TO, SECTION 02200 - EARTHWORK AND SECTION 03300 - CAST-IN-PLACE CONCRETE.

2. CURB RAMPS SHALL BE INSTALLED AT EACH INTERSECTION OR DESIGNATED CROSSWALK LOCATION AND MUST MEET THE MOST CURRENT ADA STANDARDS AND SPECIFICATIONS AT THE TIME OF CONSTRUCTION.

3. ON ACCESSIBLE ROUTES WHERE SIDEWALK IS LESS THAN 5' WIDE, PASSING SPACES AT LEAST 5'X5' SHALL BE LOCATED AT REASONABLE INTERVALS NOT TO EXCEED 200'.

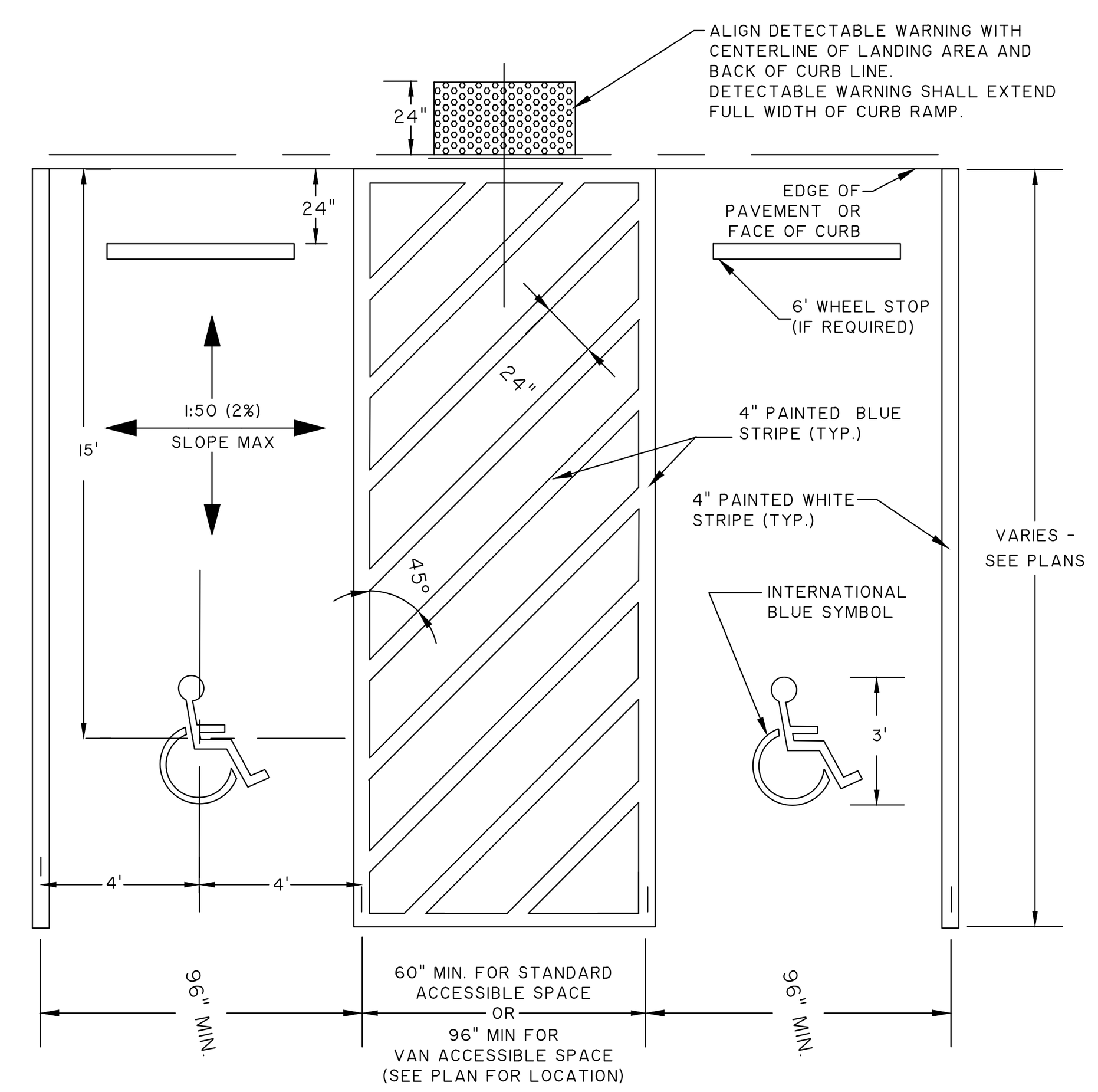
ACCESSIBLE SIDEWALK WITH THICKENED EDGE DETAIL

NOT TO SCALE



PAVEMENT "RESERVED PARKING" SYMBOL

NOT TO SCALE



NOTES:

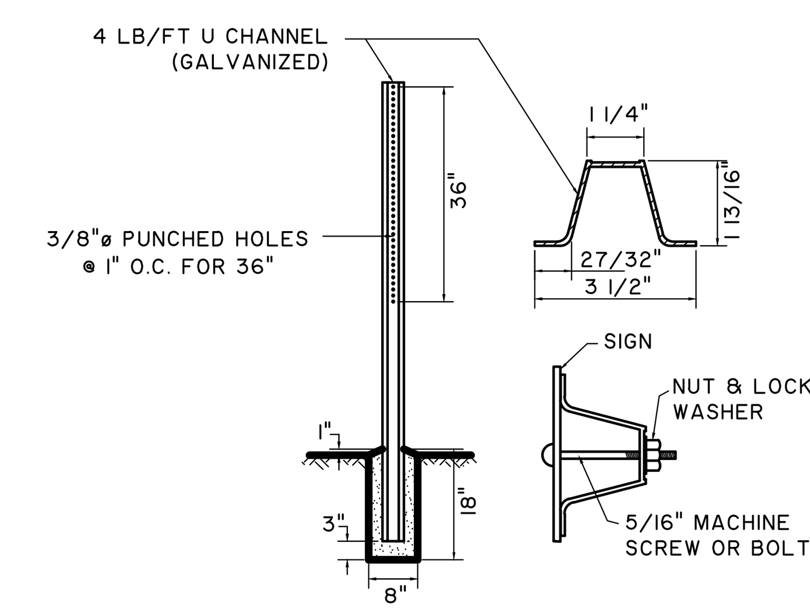
1. STRIPING AND CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND SPECIFICATIONS.

2. 2% MAXIMUM SLOPE IN ALL DIRECTIONS WITHIN ACCESSIBLE PARKING SPACE AND ACCESS AISLE.

3. ONE IN EVERY 8 ACCESSIBLE SPACES SHALL BE SERVED BY AN 8' WIDE ACCESS AISLE AND SHALL BE DESIGNATED "VAN ACCESSIBLE".

ACCESSIBLE PARKING SPACE STRIPING DETAIL

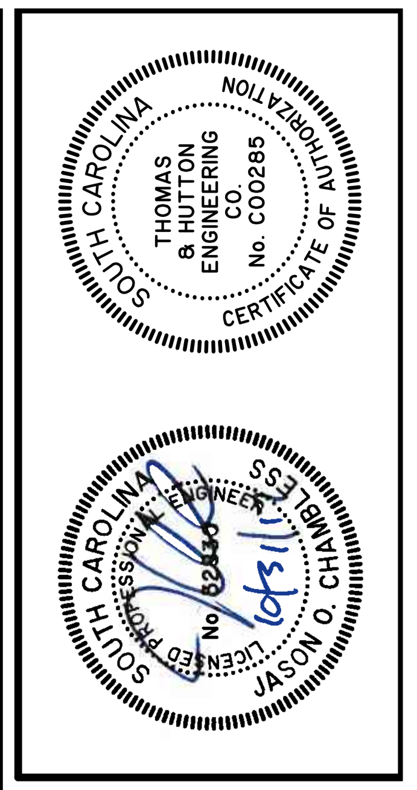
NOT TO SCALE



NOTE:
POST SHALL BE CAREFULLY CLEANED AND PHOSPHATED. IMMEDIATELY AFTER PHOSPHATING POST SHALL BE COATED WITH A MODIFIED POLYESTER PAINT BY ELECTRODEPOSITION AND THEN THOROUGHLY BAKED. COLOR IS PERMA-GREEN PER FED. STANDARD 595-A COLOR #14109 (DARK LIMIT V-)

SIGN POST DETAIL

NOT TO SCALE



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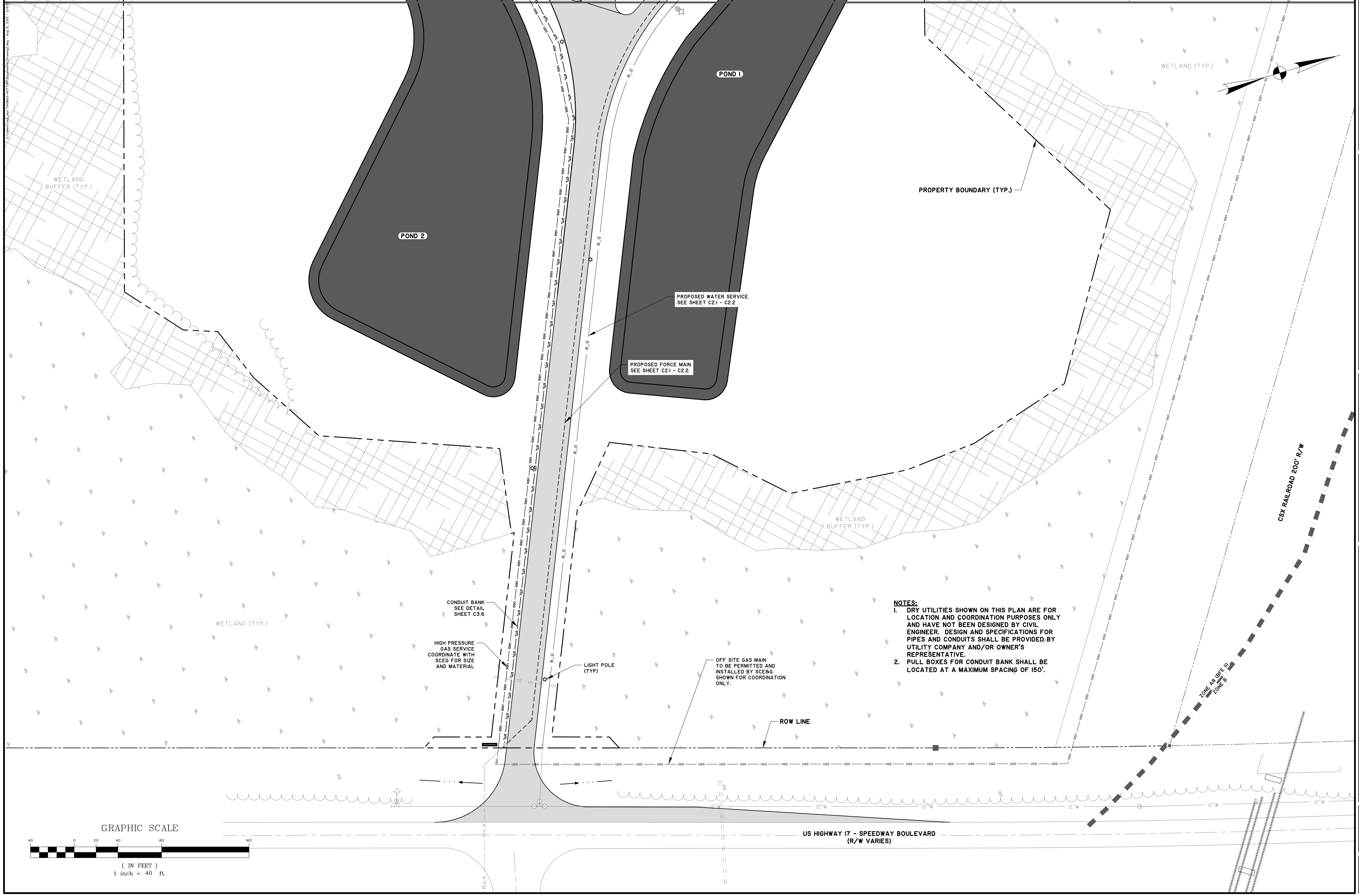
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

PAVING AND GRADING DETAILS

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 1'

C3.6



NOTES:

1. DRY UTILITIES SHOWN ON THIS PLAN ARE FOR LOCATION AND COORDINATION PURPOSES ONLY AND HAVE NOT BEEN DESIGNED BY CIVIL ENGINEER. DESIGN AND SPECIFICATIONS FOR PIPES AND CONDUITS SHALL BE PROVIDED BY UTILITY COMPANY AND/OR OWNER'S REPRESENTATIVE.
2. PULL BOXES FOR CONDUIT BANK SHALL BE LOCATED AT A MAXIMUM SPACING OF 150'.

PERMIT SET - FOR REVIEW PURPOSES ONLY

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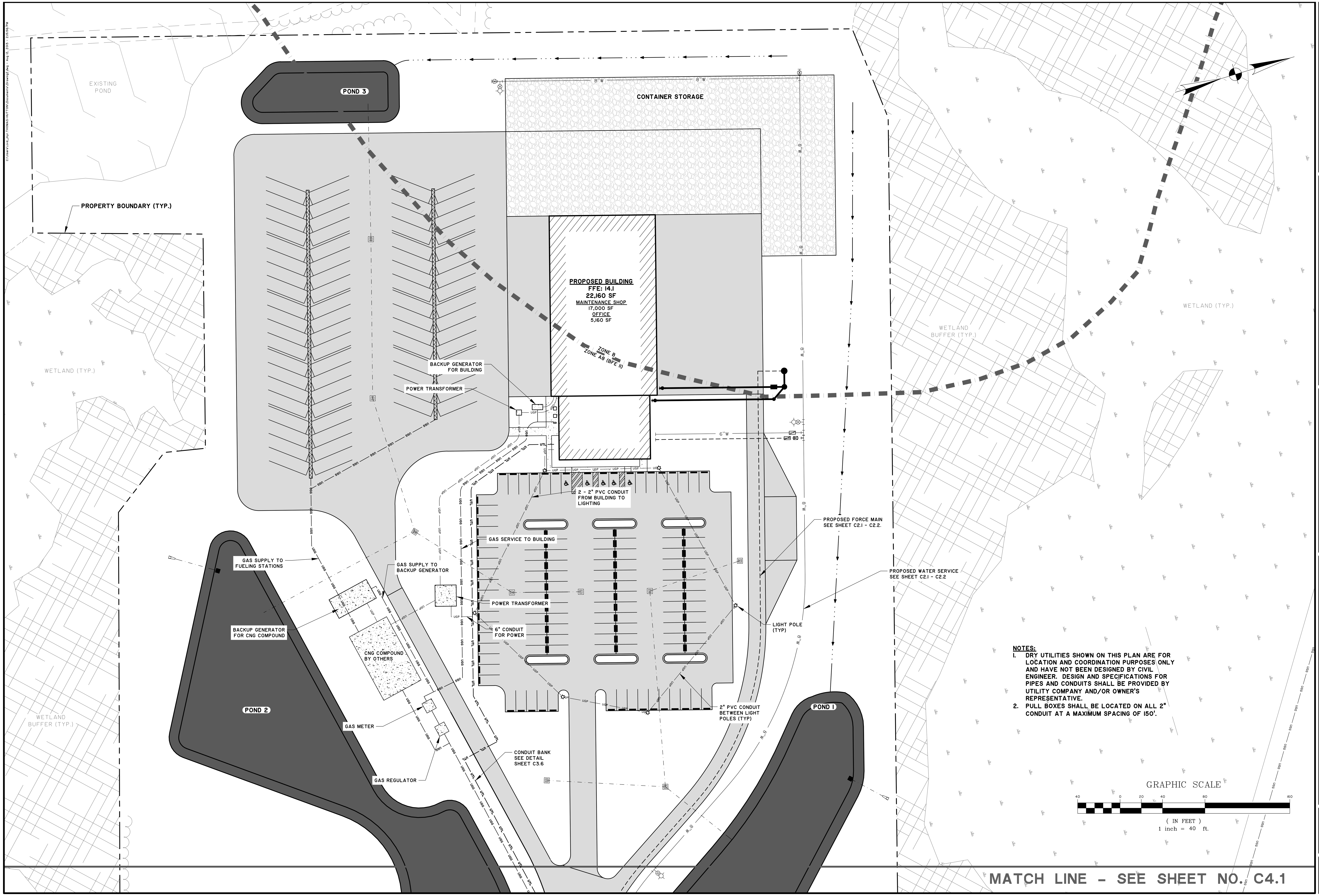
WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

DRY UTILITY PLAN

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

C4.1



NOTES:

1. DRY UTILITIES SHOWN ON THIS PLAN ARE FOR LOCATION AND COORDINATION PURPOSES ONLY AND HAVE NOT BEEN DESIGNED BY CIVIL ENGINEER. DESIGN AND SPECIFICATIONS FOR PIPES AND CONDUITS SHALL BE PROVIDED BY UTILITY COMPANY AND/OR OWNER'S REPRESENTATIVE.
2. PULL BOXES SHALL BE LOCATED ON ALL 2" CONDUIT AT A MAXIMUM SPACING OF 150'.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

MATCH LINE - SEE SHEET NO. C4.1

SOUTH CAROLINA THOMAS & HUTTON ENGINEERING CO. No. C00285 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32836 JASON O. CHAMBLESS

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

WASTE MANAGEMENT OF SOUTH CAROLINA, INC.

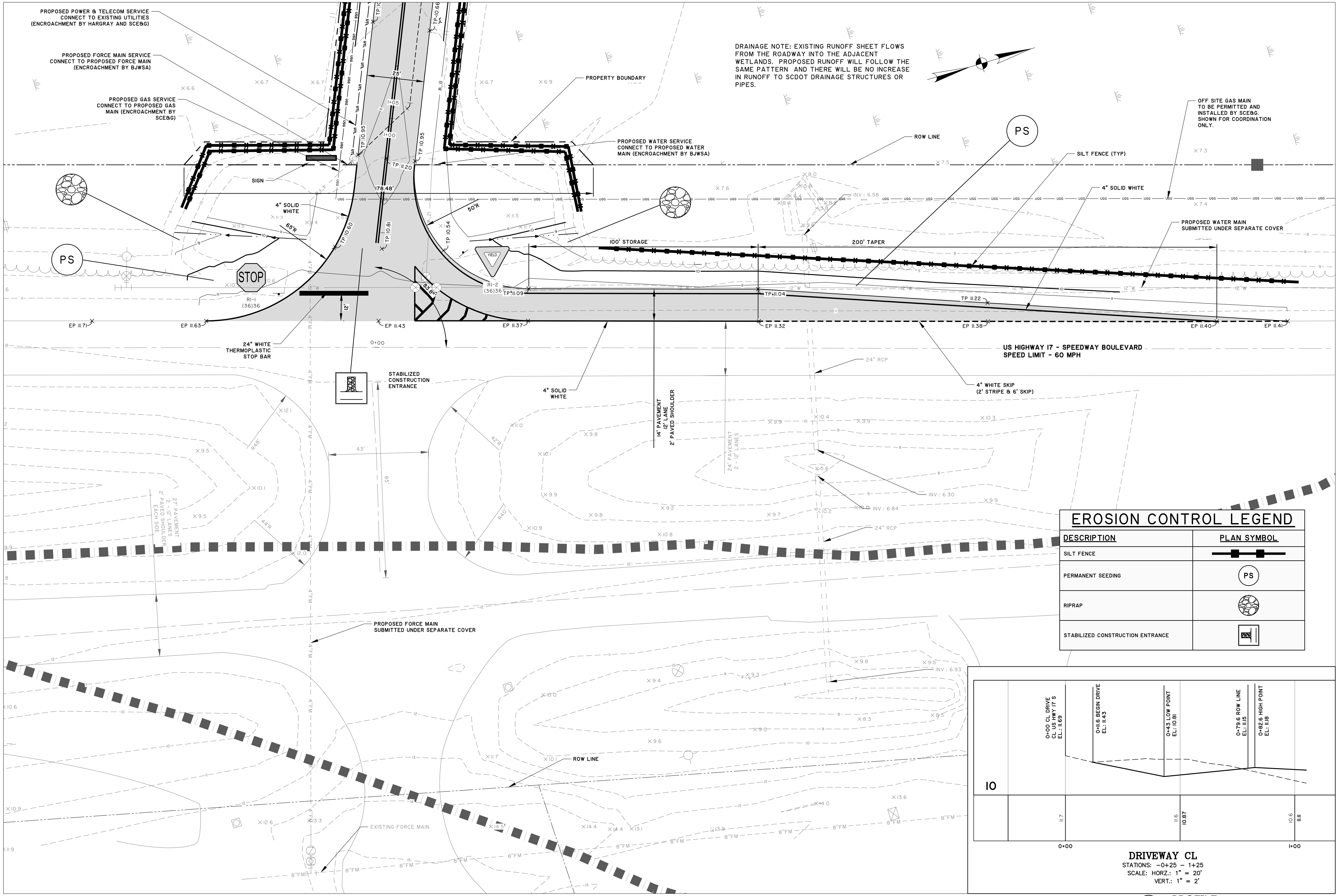
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

DRY UTILITY PLAN

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	WHE
DESIGNED:	WHE
REVIEWED:	
APPROVED:	JOC
SCALE:	1" = 40'

C4.2



PROPOSED POWER & TELECOM SERVICE CONNECT TO EXISTING UTILITIES (ENCROACHMENT BY HARGRAY AND SCE&G)
PROPOSED FORCE MAIN SERVICE CONNECT TO PROPOSED FORCE MAIN (ENCROACHMENT BY BJWSA)
PROPOSED GAS SERVICE CONNECT TO PROPOSED GAS MAIN (ENCROACHMENT BY SCE&G)
PROPERTY BOUNDARY
PROPOSED WATER SERVICE CONNECT TO PROPOSED WATER MAIN (ENCROACHMENT BY BJWSA)
DRAINAGE NOTE: EXISTING RUNOFF SHEET FLOWS FROM THE ROADWAY INTO THE ADJACENT WETLANDS. PROPOSED RUNOFF WILL FOLLOW THE SAME PATTERN AND THERE WILL BE NO INCREASE IN RUNOFF TO SCDOT DRAINAGE STRUCTURES OR PIPES.
OFF SITE GAS MAIN TO BE PERMITTED AND INSTALLED BY SCE&G. SHOWN FOR COORDINATION ONLY.
ROW LINE
SILT FENCE (TYP)
4" SOLID WHITE
PROPOSED WATER MAIN SUBMITTED UNDER SEPARATE COVER
SIGN
4" SOLID WHITE
100' STORAGE
200' TAPER
STOP
YIELD
R1-1 (36)36
R1-2 (36)36
24" WHITE THERMOPLASTIC STOP BAR
STABILIZED CONSTRUCTION ENTRANCE
4" SOLID WHITE
14' PAVEMENT 12' LANE 2' PAVED SHOULDER
24' PAVEMENT 2 - 12' LANES
US HIGHWAY 17 - SPEEDWAY BOULEVARD
SPEED LIMIT - 60 MPH
4" WHITE SKIP (2' STRIPE & 6' SKIP)
27' PAVEMENT 2 - 12' LANES 2' PAVED SHOULDER EACH SIDE
PROPOSED FORCE MAIN SUBMITTED UNDER SEPARATE COVER
ROW LINE
EXISTING FORCE MAIN
24" RCP
INV: 6.30
INV: 6.84
INV: 6.93
0+00 CL DRIVE CL US HWY 17 S EL: 11.69
0+11.6 BEGIN DRIVE EL: 11.43
0+43 LOW POINT EL: 10.81
0+79.6 ROW LINE EL: 11.15
0+82.6 HIGH POINT EL: 11.18
10
0+00
1+00
DRIVEWAY CL
STATIONS: -0+25 - 1+25
SCALE: HORZ.: 1" = 20'
VERT.: 1" = 2'

EROSION CONTROL LEGEND

DESCRIPTION	PLAN SYMBOL
SILT FENCE	
PERMANENT SEEDING	PS
RIPRAP	
STABILIZED CONSTRUCTION ENTRANCE	

1 PLAN
Scale: 1:40

2 PROFILE
Scale: 1:40

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

SCDOT PLAN

JOB NO:	J-26810.0001
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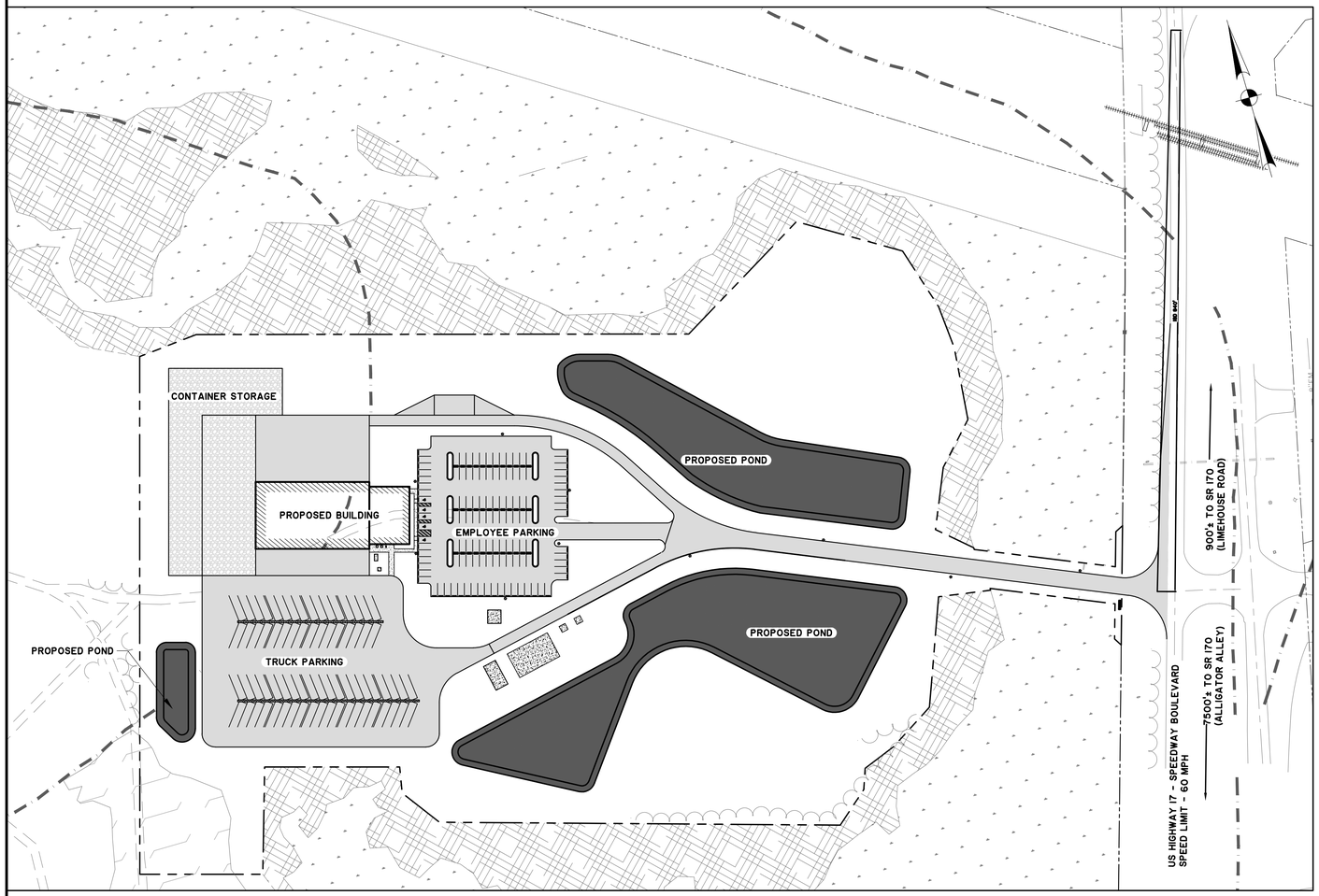
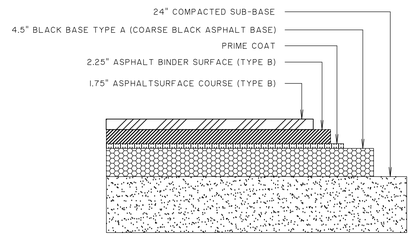
REVIEWED:	
APPROVED:	JOC
SCALE:	

C5.1



1 OVERVIEW
Scale: 1:100

2 LOCATION MAP
Scale: 1:2000



SCDOT HEAVY-DUTY PAVEMENT DETAIL
NOT TO SCALE

NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO SCDOT STANDARD SPECIFICATIONS AND DRAWINGS.
2. ALL DISTURBED AREAS WITHIN THE RIGHT OF WAY WILL BE PERMANENTLY STABILIZED ACCORDING TO SCDOT GRASSING SPECIFICATION.

SOUTH CAROLINA — THOMAS & HUTTON ENGINEERING Co. No. C00285 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — JASON O. CHANEY — 10/31/17

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SCALE:	

C5.2

MATCH LINE - SEE SHEET NO. L1.2

WETLAND BUFFER (TYP.)

WETLAND (TYP.)

PRESERVED TREE LINE (TYP.)

GRASS SEEDING FOR ALL OTHER DISTURBED AREAS NOT SHOWN AS OTHERWISE PLANTED.

WETLAND (TYP.)

CSX RAILROAD 200' R/W

ZONE AE (BFE 11)
ZONE B

US HIGHWAY 17 - SPEEDWAY BOULEVARD
(R/W VARIES)

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORP. 202-C THOMAS & HUTTON ENGINEERING CO.

STATE OF SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 106 RYAN P. THOMPSON 10/31/17

PERMIT SET - FOR REVIEW PURPOSES ONLY

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

PERMIT LANDSCAPE PLAN

JOB NO:	J-26810.0001
DATE:	10/31/17
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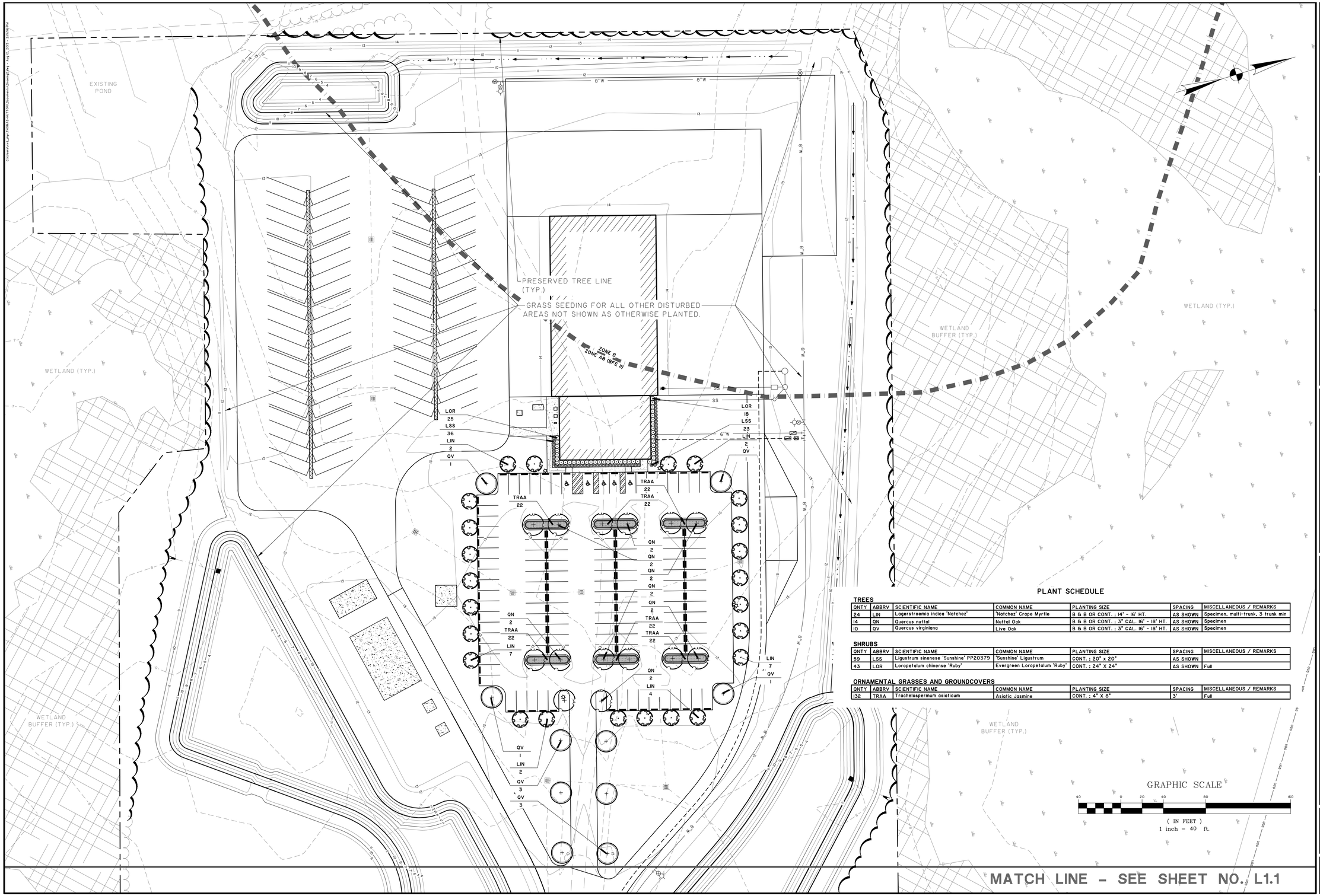
APPROVED:	RPT
SCALE:	1" = 40'

L1.1



PLANT SCHEDULE

TREES

QNTY	ABBRV	SCIENTIFIC NAME	COMMON NAME	PLANTING SIZE	SPACING	MISCELLANEOUS / REMARKS
24	LIN	Lagerstroemia indica 'Natchez'	'Natchez' Crape Myrtle	B & B OR CONT. ; 14' - 16' HT.	AS SHOWN	Specimen, multi-trunk, 3 trunk min
14	QN	Quercus nuttal	Nuttal Oak	B & B OR CONT. ; 3" CAL. 16' - 18' HT.	AS SHOWN	Specimen
10	QV	Quercus virginiana	Live Oak	B & B OR CONT. ; 3" CAL. 16' - 18' HT.	AS SHOWN	Specimen

SHRUBS

QNTY	ABBRV	SCIENTIFIC NAME	COMMON NAME	PLANTING SIZE	SPACING	MISCELLANEOUS / REMARKS
59	LSS	Ligustrum sinenese 'Sunshine' PP20379	'Sunshine' Ligustrum	CONT. ; 20" x 20"	AS SHOWN	
43	LOR	Loropetalum chinense 'Ruby'	Evergreen Loropetalum 'Ruby'	CONT. ; 24" X 24"	AS SHOWN	Full

ORNAMENTAL GRASSES AND GROUNDCOVERS

QNTY	ABBRV	SCIENTIFIC NAME	COMMON NAME	PLANTING SIZE	SPACING	MISCELLANEOUS / REMARKS
132	TRAA	Trachelospermum asiaticum	Asiatic Jasmine	CONT. ; 4" X 8"	3"	Full

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

MATCH LINE - SEE SHEET NO. L1.1

SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORP. C-202 THOMAS & HUTTON ENGINEERING CO.

STATE OF SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 901 RYAN P. THOMPSON 10/31/17

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

PERMIT LANDSCAPE PLAN

JOB NO:	J-26810.0001
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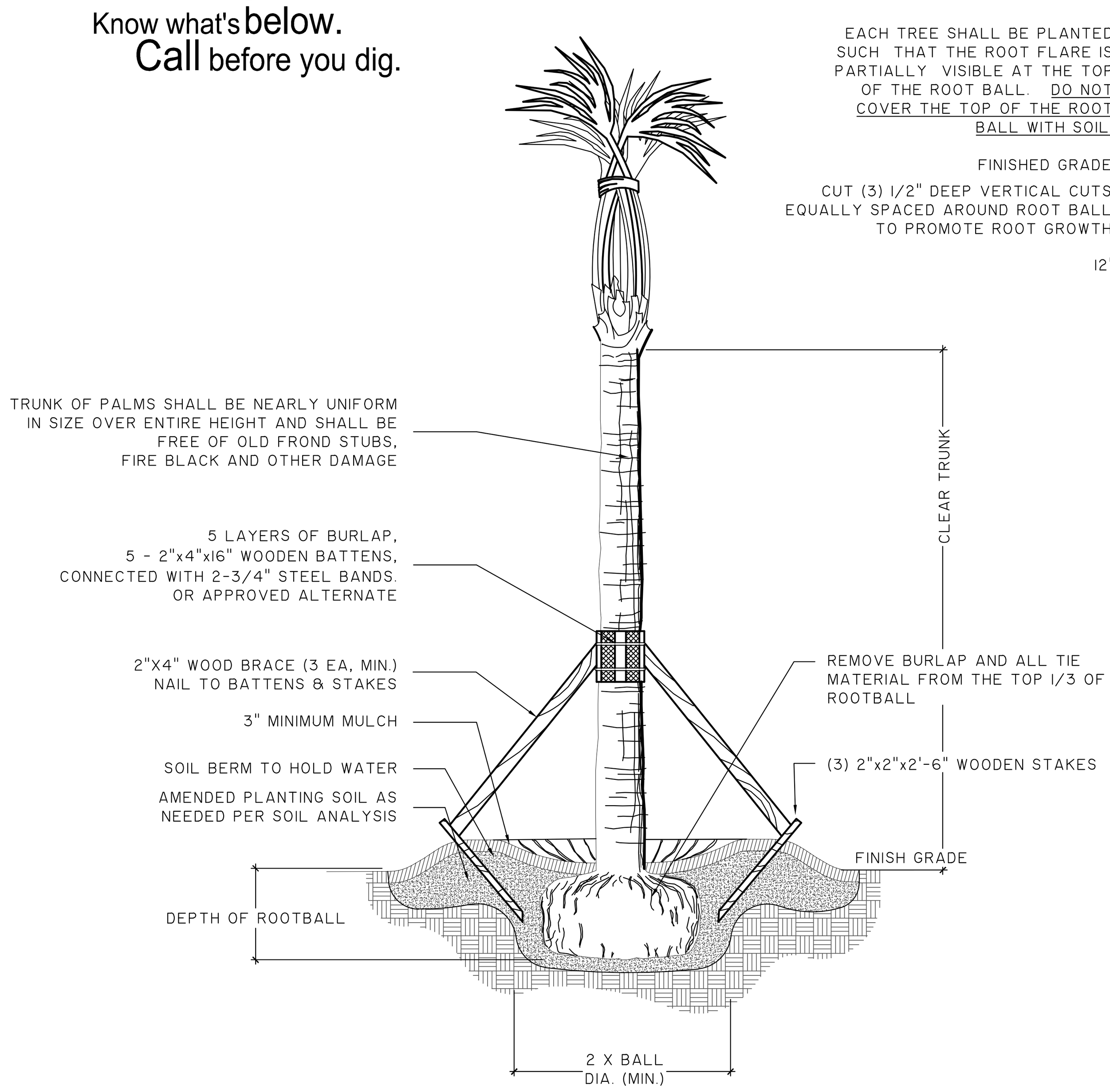
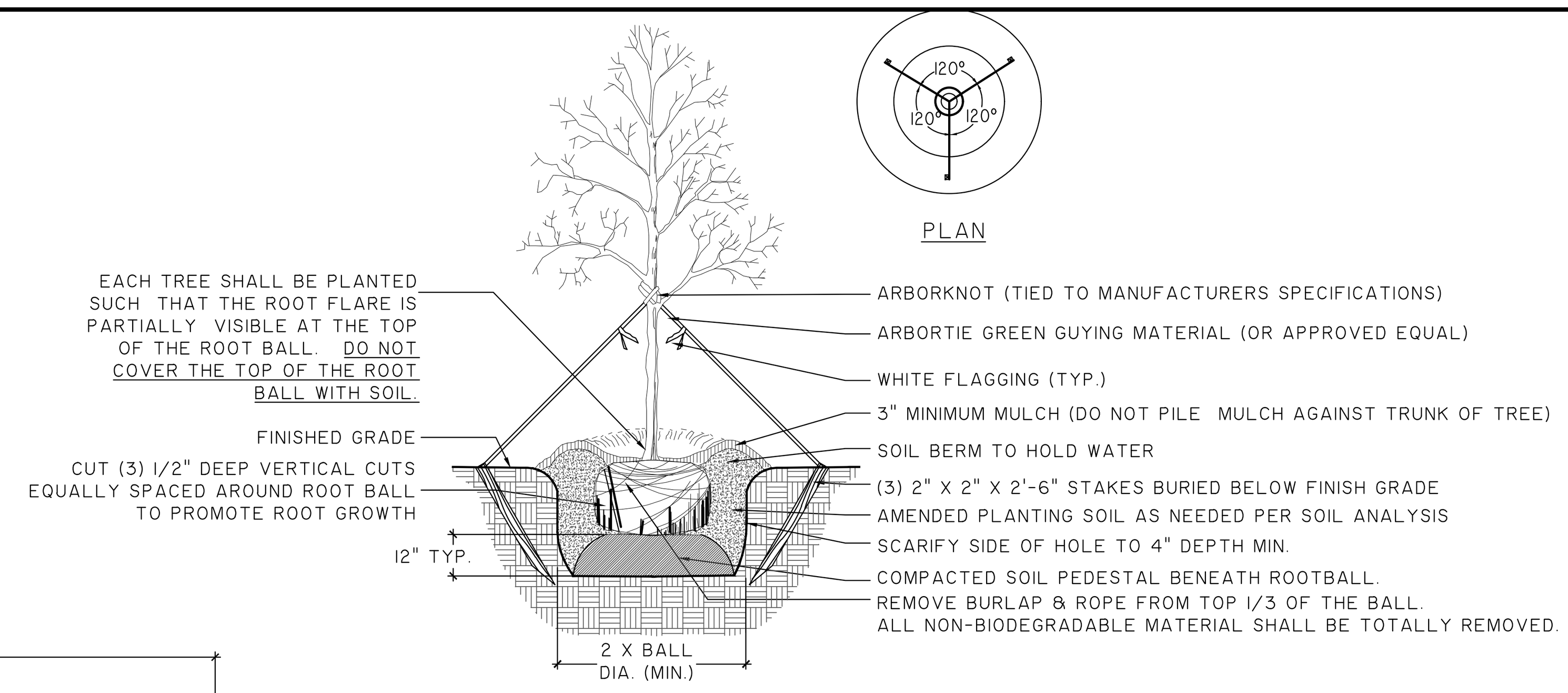
L1.2

Know what's below.
Call before you dig.



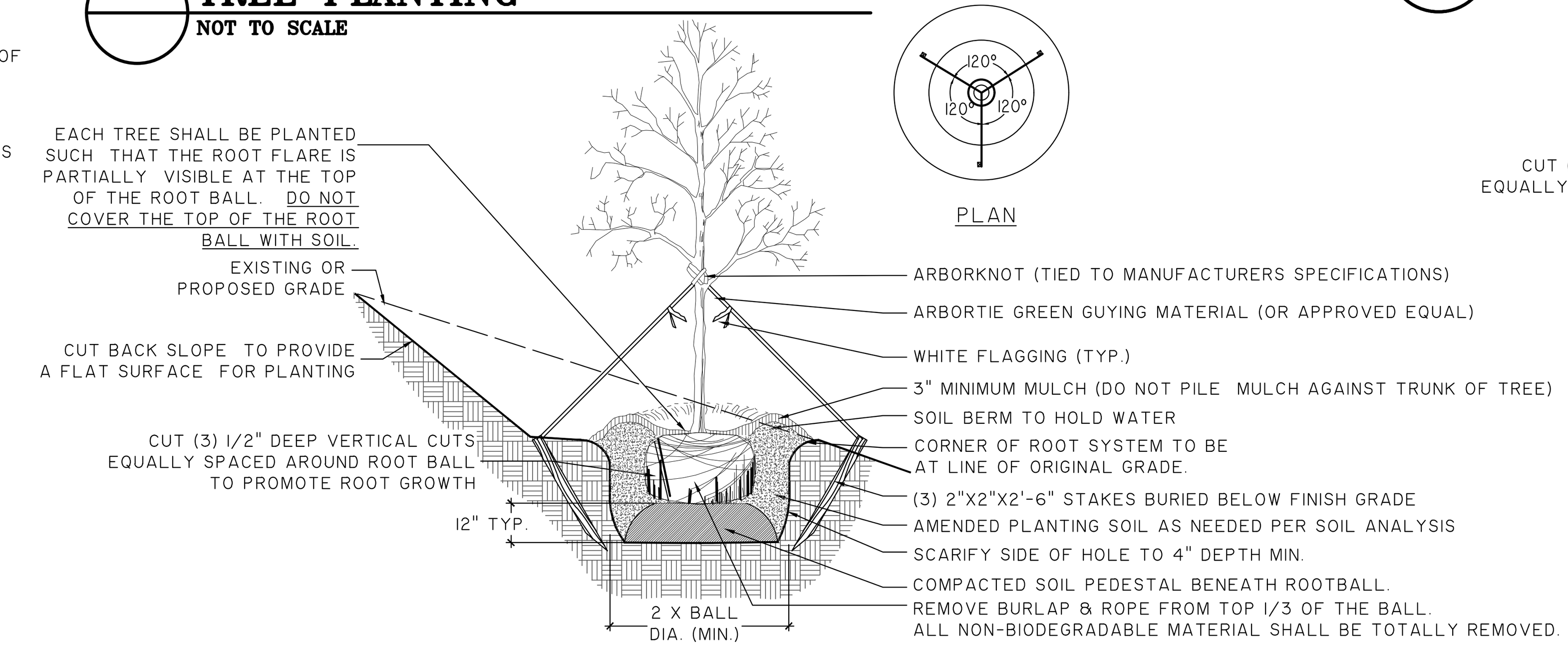
NOTES:
1) SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.
2) PLANT ROOT BALL FLUSH WITH FINISHED GRADE UNLESS AREA HAS POOR DRAINAGE, IN WHICH CASE PLANT ROOTBALL 2" ABOVE GRADE.
3) SABAL PALMETTOS SHALL BE DEFOLIATED, PROTECT CABBAGE HEAD FROM DAMAGE. ALL OTHER PALM SPECIES MUST HAVE FRONDS TIED W/BIODEGRADABLE STRAP OR TWINE.
4) FINAL TREE STAKING AND PLACEMENT TO BE APPROVED BY OWNER'S REP.
5) CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

PALM TREE PLANTING
NOT TO SCALE



NOTES:
1) SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.
2) ONLY GUY TREES WHEN SITE CONDITIONS REQUIRE IT.
3) PLANT ROOT BALL FLUSH WITH FINISHED GRADE UNLESS AREA HAS POOR DRAINAGE, IN WHICH CASE PLANT ROOTBALL 2" ABOVE GRADE.
4) REMOVE ALL BRANCHES THAT ARE DAMAGED, RUBBING, OR CROSSING OTHER BRANCHES.
5) NEVER CUT A CENTRAL LEADER.
6) FINAL TREE STAKING AND PLACEMENT TO BE APPROVED BY OWNER'S REP.
7) CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

TREE PLANTING
NOT TO SCALE



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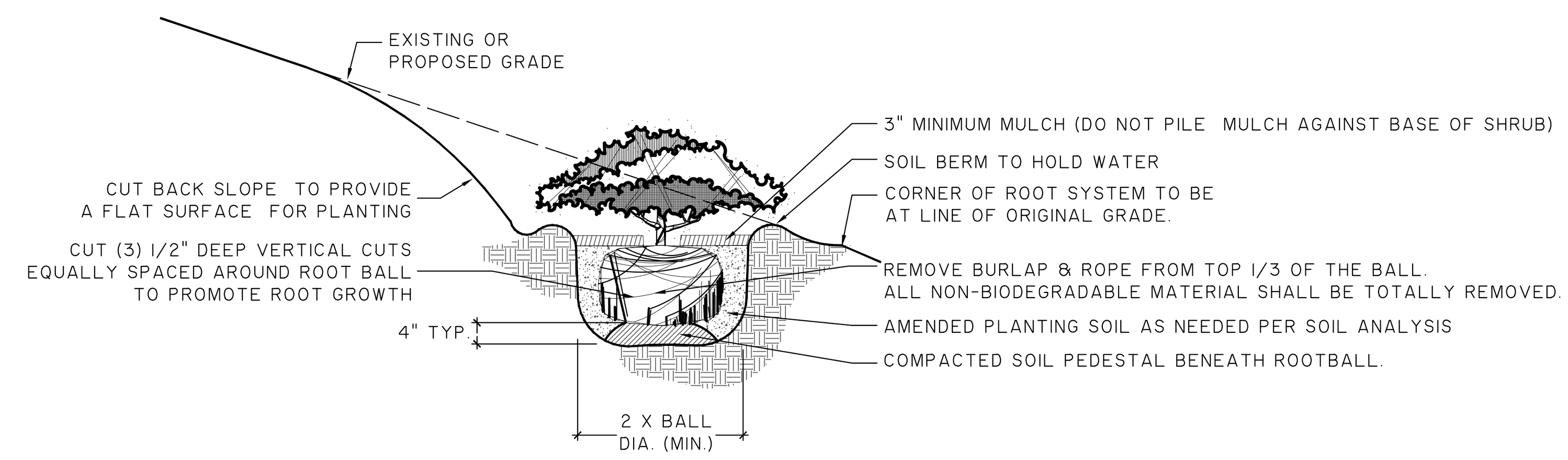
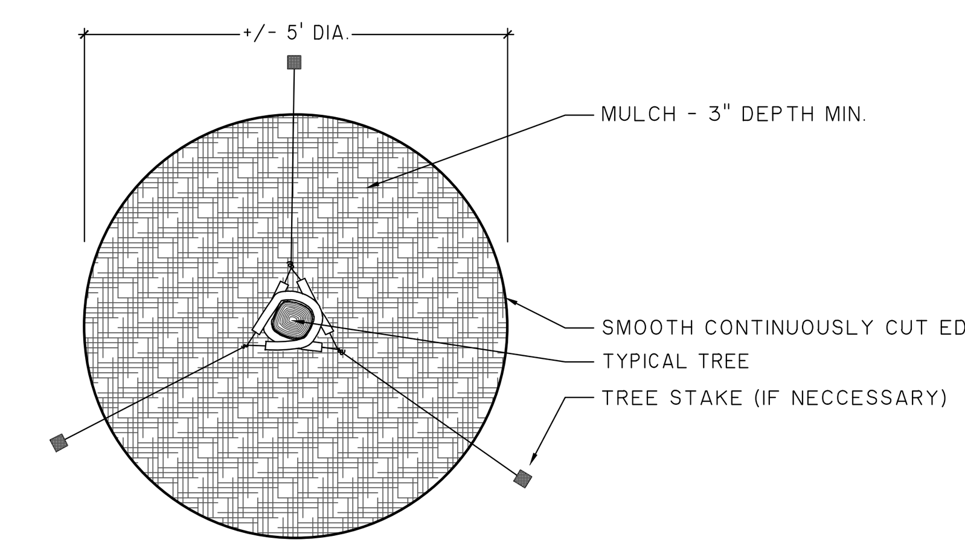
TREE PLANTING ON A SLOPE
NOT TO SCALE



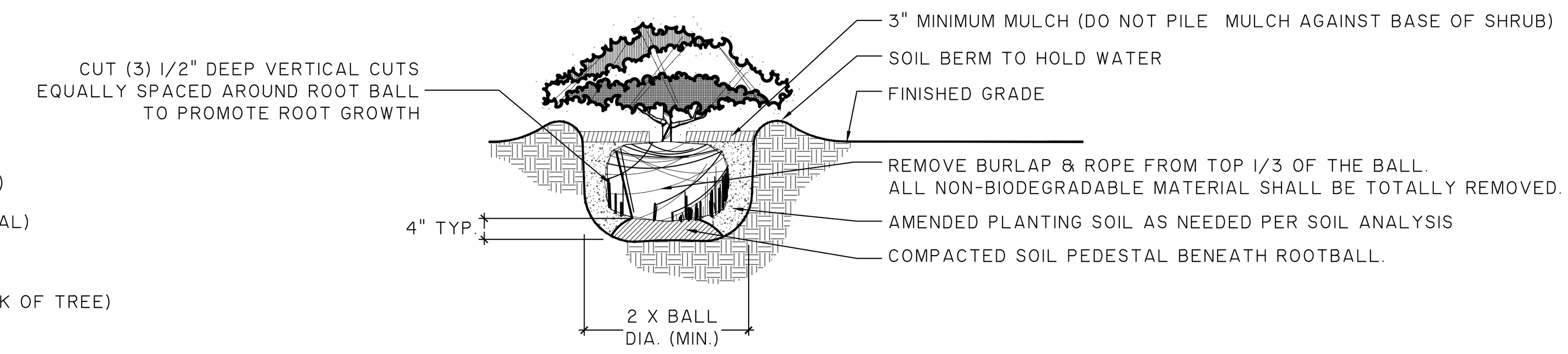
NOTES:
1) SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.
2) WHEN GROUNDCOVER AND SHRUBS ARE USED IN MASSES, DO NOT FORM SOIL BERMS ON INDIVIDUAL PLANTS AND ENTIRE PLANTING BED SHALL BE EXCAVATED TO RECEIVE PLANTING SOIL AND PLANT MATERIAL.
3) PLANT ROOT BALL FLUSH WITH FINISHED GRADE UNLESS AREA HAS POOR DRAINAGE, IN WHICH CASE PLANT ROOTBALL 2" ABOVE GRADE. COORDINATE WITH OWNER'S REP. PRIOR TO SETTING ROOTBALL ELEVATIONS.
4) CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

SHRUB PLANTING ON A SLOPE
NOT TO SCALE



NOTES:
1) SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.
2) APPLY MULCH IN A +/- 5' DIAMETER WHERE PROPOSED TREE PLANTINGS OCCUR IN SOD OR SEEDED AREA.

TREE RING
NOT TO SCALE



NOTES:
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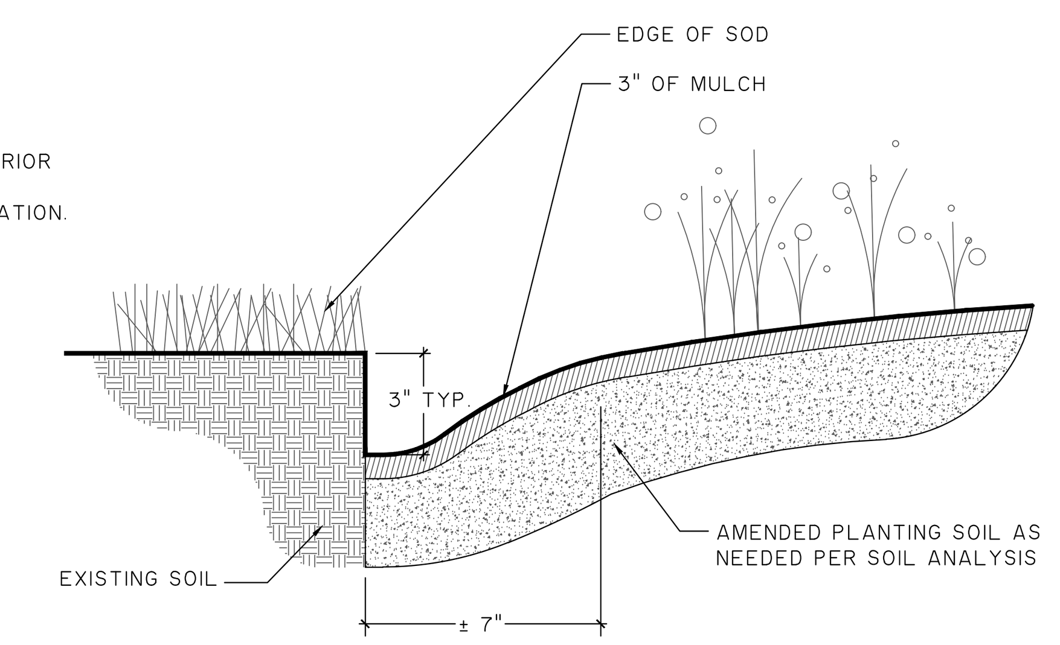
4) CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

SHRUB PLANTING
NOT TO SCALE



NOTES:
1) TRENCH EDGE TO BE LOCATED BETWEEN PLANTING BEDS AND ALL LAWN AREAS.

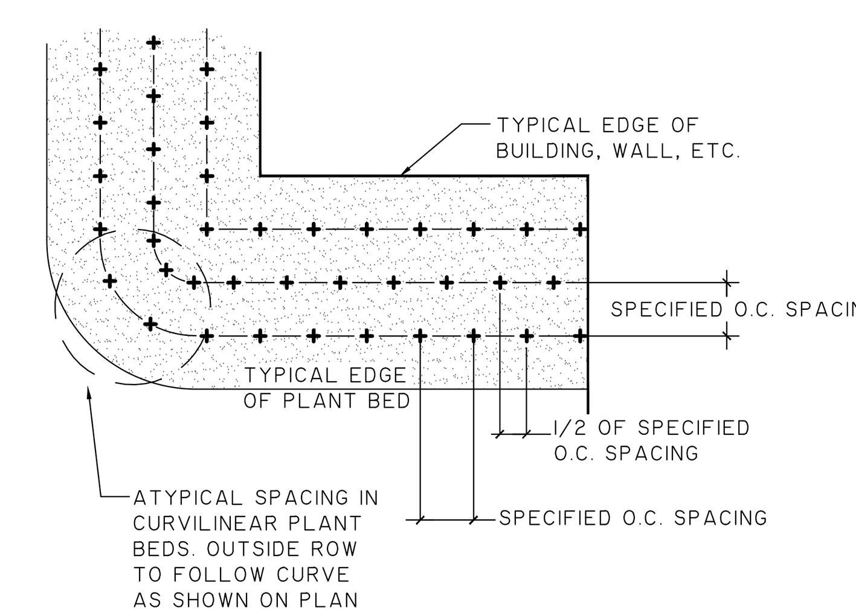
SOD TO PLANT BED EDGE
NOT TO SCALE

GENERAL PLANTING / IRRIGATION NOTES:

1. REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING AND BURLAPPING OF PLANTS IN THE PLANT LIST SHOULD FOLLOW OR EXCEED THE STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN THE AMERICAN STANDARD FOR NURSERY STOCKS (ASNS). UNLESS OTHERWISE SPECIFIED, ANY SIZE SPECIFIED SHALL BE CONSIDERED MINIMUM. MINIMUMS FOR HEIGHT, SPREAD, CALIPER, ETC. SHALL TAKE PRECEDENT OVER A SPECIFIED CONTAINER SIZE. (I.E. - IF 7 GALLON IS REQUIRED, TO PROVIDE A SPECIFIED HEIGHT OR SPREAD THAT IS SPECIFIED AS A 3 GALLON, THEN THE 7 GALLON SHALL BE SHALL BE REQUIRED AND INCLUDED IN THE BASE BID AND SHALL NOT BE CONSIDERED A CHANGE ORDER.)
2. ALL PLANTS SHALL HAVE A WELL FORMED HEAD WITH MINIMUM CALIPER, HEIGHT AND SPREAD OF THE SIDE BRANCHES AS SHOWN ON THE PLANT LIST. TRUNKS SHALL BE UNDAMAGED AND SHAPE SHALL BE TYPICAL OF THE SPECIES.
3. MEASUREMENT OF CONIFER HEIGHT SHALL INCLUDE NOT MORE THAN FIFTY (50) PER CENT OF THIS YEARS' VERTICAL GROWTH (TOP CANDLE).
4. THE LANDSCAPE CONTRACTOR IS HEREBY NOTIFIED OF THE EXISTENCE OF UNDERGROUND UTILITIES WITHIN THE LIMITS OF THE PROJECT AREA. THE CONTRACTOR SHOULD VERIFY THE EXACT LOCATION OF ALL UTILITY LINES PRIOR TO COMMENCEMENT OF DIGGING OPERATIONS. CONTRACTOR RESPONSIBLE FOR LOCATING, PROTECTING, AND REPAIRING ALL DAMAGE TO BUILDINGS, UTILITIES, PAVEMENT, AND CURB & GUTTER. ANY REPAIRS SHALL BE DONE PROMPTLY AT CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR WILL BE RESPONSIBLE FOR STAKING AND LAYOUT OF PLANTINGS ON THIS PROJECT. THE LANDSCAPE ARCHITECT OR OWNER SHALL BE ADVISED WHEN STAKES ARE READY FOR INSPECTION ON VARIOUS PLANTING AREAS. ALL LAYOUT WORK SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT AND OWNER PRIOR TO OPENING ANY PLANTING PITS.
6. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO VERIFY THAT EACH EXCAVATED TREE OR SHRUB PIT WILL PERCOLATE (DRAIN) PRIOR TO ADDING TOPSOIL AND INSTALLING TREES OR SHRUBS. THE CONTRACTOR SHALL FILL THE BOTTOM OF HOLES WITH SIX (6) INCHES OF WATER. THIS WATER SHOULD PERCOLATE WITHIN A TWENTY-FOUR (24) HOUR PERIOD. IF WATER DOESN'T PERC, CONTRACTOR SHALL NOTIFY THE OWNER'S REP PRIOR TO INSTALLING PLANTS.
7. SHOULD THE LANDSCAPE CONTRACTOR ENCOUNTER UNSATISFACTORY SURFACE OR SUBSURFACE DRAINAGE CONDITIONS, SOIL DEPTH, LATENT SOILS, HARD PANS, STEAM OR OTHER UTILITY LINES OR OTHER CONDITIONS THAT WILL JEOPARDIZE THE HEALTH AND VIGOR OF THE PLANTS, HE MUST ADVISE THE LANDSCAPE ARCHITECT IN WRITING OF THE CONDITIONS PRIOR TO INSTALLING THE PLANTS. OTHERWISE, THE LANDSCAPE CONTRACTOR WARRANTS THAT THE PLANTING AREAS ARE SUITABLE FOR PROPER GROWTH AND DEVELOPMENT OF THE PLANTS TO BE INSTALLED.
8. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP THE SITE AT THE COMPLETION OF THE PROJECT AND SHALL MAINTAIN THE SITE IN A REASONABLY NEAT AND CLEAN STATE THROUGHOUT THE INSTALLATION PROCESS. STREETS AND PAVED AREAS SHALL BE CLEANED REGULARLY TO REMOVE CONSTRUCTION MATERIALS AND OTHER DEBRIS RESULTING FROM WORK OF THE PROJECT.
9. REPLACEMENTS OF DEAD OR UNSATISFACTORY MATERIAL SHALL BE MADE AS SPECIFIED IN THE PLANT LIST. THE OWNER OR LANDSCAPE ARCHITECT SHALL INSPECT REPLACED PLANTS WHEN ALL REPLACEMENTS HAVE BEEN MADE. REPLACEMENTS ARE TO BE ALIVE AND IN A HEALTHY CONDITION WHEN THE REPLACEMENTS ARE COMPLETE. REPLACEMENTS ARE NOT SUBJECT TO AN ADDITIONAL GUARANTEE, BUT THE LANDSCAPE CONTRACTOR SHALL CONSULT WITH THE LANDSCAPE ARCHITECT ON REASON FOR PLANT DECLINE/DEATH AND HOW TO AVOID FUTURE INSTANCES.
10. SHOULD THE CONTRACTOR NOT MAKE REPLACEMENTS IN A SATISFACTORY AND TIMELY FASHION IN ACCORD WITH THE PLANTING NOTES, THE OWNER, AFTER PROPER NOTIFICATION TO THE CONTRACTOR MAY UTILIZE THE FUNDS OF THE RETAINAGE TO HAVE THE REPLACEMENTS MADE IN ACCORDANCE WITH THE SPECIFICATIONS BY ANOTHER CONTRACTOR.
11. NO EXCAVATION OR PLANTING PIT SHALL BE LEFT UNATTENDED OVERNIGHT.
12. PLANT MATERIAL QUANTITIES PROVIDED IN THE PLANT LIST ARE FOR REFERENCE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR THE ACTUAL PLANT MATERIAL COUNTS. DISCREPANCIES BETWEEN QUANTITIES SHOWN ON THE PLANTING PLAN AND THOSE IN THE PLANT LIST SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION. IF CLARIFICATION OF DISCREPANCIES FROM THE LANDSCAPE ARCHITECT IS NOT POSSIBLE, THEN QUANTITIES SHOWN ON THE PLANTING PLAN SHALL TAKE PRECEDENCE.
13. REMOVE BURLAP/STRAPPING AND WIRE BASKET FROM TOP 1/3 OF ROOT BALL ON TREES.
14. REMOVE PAPER, PLASTIC OR METAL AROUND ROOT BALLS OF SHRUBS.
15. DO NOT WRAP TREES.
16. WATER ALL PLANT MATERIAL IMMEDIATELY AFTER PLANTING.
17. TREE GUYING MATERIAL SHALL BE 'ARBOR-TIE' OR EQUIVALENT.
18. ALL PLANT BEDS TO BE MULCHED WITH 3" OF DOUBLE SHREADED HARDWOOD MULCH.
19. ALL AREAS OF PLANTING, INCLUDING AREAS OF GRASS SEEDING AND SOD, SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AND SHALL BE PROVIDED APPROPRIATE SOIL FOR THE PROPOSED PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL ADJUST PH AND / OR SOIL FERTILITY BY UNIFORMLY INCORPORATING REQUIRED SOIL CONDITIONING MATERIALS AT THE RATE AND DEPTH DETERMINED BY THE ANALYSIS OF THE SOIL TEST (AS REQUIRED IN 3.02 AND 3.13 OF THE LANDSCAPING SPECIFICATIONS). EACH SOIL TEST SHALL BE SPECIFIC TO THE PROPOSED PLANT MATERIAL TO BE INSTALLED IN A GIVEN AREA.
20. ALL EXISTING VEGETATION WITHIN AREAS TO BE PLANTED / SODDED / SEEDED SHALL BE REMOVED PRIOR TO PLANTING / SODDING / SEEDING. ALL AREAS INDICATED TO BE GRASS SEED SHALL BE SEEDED PER GRASSING SPECIFICATIONS FOR PERMANENT STABILIZATION.
21. CONTRACTOR SHALL COORDINATE WITH OWNER ON THE EXTENTS, IF ANY, OF A PERMANENT IRRIGATION SYSTEM. IF NO IRRIGATION IS PROVIDED, CONTRACTOR SHALL PROVIDE TEMPORARY WATERING AS NECESSARY DURING THE WARRANTY AND ESTABLISHMENT PERIOD.
22. ALL TREES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE HARDEEVILLE, SOUTH CAROLINA APPLICABLE ORDINANCES.
23. ALL PLANT BEDS TO RECEIVE WEED INHIBITOR OF PREEN OR ACCEPTED ALTERNATE.
24. FOR SUMMERTIME PLANTINGS, CONTRACTOR TO USE EITHER CONTAINERIZED OR PRE-DUG B & B PLANT MATERIAL.
25. AS AN ADD ALTERNATE BID, THE CONTRACTOR SHALL PROVIDE "SOIL MOIST TRANSPLANT" (OR ACCEPTED EQUIVALENT) AT THE APPLICATION RATES SHOWN BELOW FOR ALL NEWLY INSTALLED PLANTINGS.

Container Size/Amount	Caliper Size/Amount
1 Gallon/.75 oz.	1"/3.0 oz.
2 Gallon/1.5 oz.	2"/6.0 oz.
3 Gallon/1.5 oz.	3"/9.0 oz.
5 Gallon/2.0 oz.	4"/12.0 oz.
7 Gallon/3.0 oz.	5"/15.0 oz
10 Gallon/3.0 oz.	6"/18.0 oz
15 Gallon/5.0 oz.	7"/21.0 oz
20 Gallon/7.0 oz.	8"/24.0 oz

Plant Height/Amount	Box Size/Amount
2'/1.5 oz.	16"/5.0 oz.
3'/2.0 oz.	20"/6.0 oz.
4'/3.0 oz.	24"/9.0 oz.
5'/4.0 oz.	30"/12.0 oz.
6'/5.0 oz.	36"/18.0 oz
7'/6.0 oz.	42"/27.0 oz
	60"/30.0 oz.



NOTES:
1) EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER PLANTING TO A DEPTH OF 12".

PLANT SPACING DETAIL
NOT TO SCALE

SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORP 202-C THOMAS & HUTTON ENGINEERING CO.
State of South Carolina REGISTERED LANDSCAPE ARCHITECT No. 901 RYAN P. THOMPSON 10/31/17

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO.	REVISIONS	BY	DATE

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Savannah, GA 31405 • 912.234.5300
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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

PLANTING DETAILS AND NOTES

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	RPT
DESIGNED:	RPT
REVIEWED:	RPT
APPROVED:	RPT
SCALE:	NTS

L2.1

LANDSCAPING SPECIFICATION

LANDSCAPING

PART 1 - GENERAL

1.1 DESCRIPTION

A. The work covered in this section consists of soil preparation, fine grading, lawns, trees, shrubs and ground cover plantings, their protection and maintenance of planted areas until acceptance.

1.2 RELATED WORK

A. See Civil and Landscape plans and specifications.

1.3 QUALITY ASSURANCE

A. Qualifications of Workmen: Contractor shall provide at least one person present at all times during execution of work that is thoroughly familiar with the type of materials being installed and proper equipment and methods for their installation and who shall direct all work performed under this section.

B. Standards: All seed, sod, trees, shrubs, and ground covers shall meet or exceed the specifications of Federal, State, County and / or Municipality laws requiring inspection for disease and insect control.

1. Plants and planting methods shall conform to the latest edition of American Standard for Nursery Stock, American Nursery & Landscape Association, 1000 Vermont Avenue, NW, Suite 300, Washington, DC 20005
2. Plants shall be true and representative of their genus, species, cultivar, or variety. Nursery stock shipped in accordance with the required specifications shall be deemed to be acceptable within the terms of this section if it is typical in size and habit for the species in the region of the country in which it is grown unless the specifications include additional details.
3. Prior to ordering any plant material, representative photos of each species shall be provided for review and acceptance.
4. One of each bundle or lot shall be tagged with name and size of the plant in accordance with American Nursery & Landscape Association standards. In all cases, botanical names shall take precedence over common names. Landscape Architect should be consulted in the event questions arise about nomenclature of plants to be used and their availability.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging and location of packaging. Damaged packages are not acceptable.

B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

C. Deliver sod on pallets.

D. Handling of plants shall be by lifting the root mass or container and not by lifting plant by trunk or branches. Handling of plants in an improper fashion shall be cause for rejection of plant materials. Care must be taken during all phases of the location and planting procedures not to damage root system, trunk or branches. All plant materials shall be planted as soon after arrival at the site as possible. Contractor is responsible for keeping plants safe from injury by the construction activity and watered to prevent drying out before planting. Balled and burlapped plants shall be "Healed-in" and protected with burlap or other accepted material if they cannot be planted upon delivery. Plants with broken major branches, badly bruised or damaged bark are not acceptable and will be rejected.

1.5 PLANTING DATES

A. The planting season for trees, shrubs and groundcovers is between October 1st and June 1st of the following year. Do not plant if temperature is below freezing or above 90 degrees. Planting at any other time other than the planting season is the Contractor's option and full responsibility and without additional compensation. Planting may, at the option of the Contractor, be postponed into the following planting season but without additional compensation provided the Owner and local governing jurisdiction have approved.

C. Planting dates for sod, sprigging or seeding shall be per the grassing specification.

1.6 MEASUREMENT AND PAYMENT

A. Measurement - The items listed in the proposal shall be considered as sufficient to complete the work in accordance with the plans and specifications. Any portion of the work not listed in bid form, but required to complete the work, shall be deemed to be a part of the item with which it is associated and shall be included in the cost of the unit shown on the bid form.

B. Payment - Payment for the unit shown on the bid form shall be considered to cover the cost of all labor, material, equipment, and performing all operations necessary to complete the work in place. No payment will be made for any material wasted, used for the convenience of the Contractor, unused or rejected.

1. Trees, Shrubs, and Groundcovers - Will be paid for at the contract unit price for planted/installed and accepted trees, shrubs, and groundcovers.
2. Payment for grassing will be made per the grassing specification.
3. Clearing - Will be paid for at the lump sum price for clearing.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Contractor shall, at time of delivery, furnish Owner and / or Landscape Architect with invoices of all materials received; in order the quality and source of materials may be reviewed.

2.2 TOPSOIL

A. Topsoil shall be existing soil on site amended per Soil Test recommendations.

2.3 SEED

A. See grassing specification.

2.4 SPRIG

A. See grassing specification.

2.5 SOD

A. See grassing specification.

2.6 PLANT MATERIALS

A. Provide all plant materials as indicated on the plans. In the event of any discrepancies between quantities of plants indicated on the plant schedule and those indicated on the plan, plan quantities shall govern.

B. Plants shall be sound, healthy and vigorous, well branched and densely foliated when in leaf. They shall be free of disease, insect pests, eggs or larvae, and shall have healthy, well developed root systems. Plants shall be from a nursery within 300 miles north or south of the project location and shall have been grown under climate conditions similar to those in the locality of project. Trees for planting in rows shall be uniform in size and shape.

B. Plants shall possess a normal balance between height and width. Plants shall be measured when branches are in their normal position. Height and spread dimensions specified refer to the main body of plant and not from branch tip to tip. Plants larger in size than specified may be used with no change in contract price.

C. Plants shall be dug with firm natural balls of earth, of diameter not less than recommended by American Standard for Nursery Stock and of sufficient depth to include fibrous and feeding roots. Plants will not be accepted if ball is cracked or broken before or during planting operations.

D. Trees specified for Street Tree Grade shall conform to standards of the A.N.L.A.:

1. Suitable for planting as street trees.
2. Free of branches to approximately 50% of height from ground.
3. Crown of tree shall be in good balance with the trunk.

2.7 FERTILIZER

A. Commercial fertilizer shall be slow release 5-10-10 or 6-12-12 (or as recommended by soil test), uniform in composition, free flowing, and suitable for application with appropriate equipment. Deliver to site unopened in manufacturer's standard containers showing weight, analysis and name of manufacturer. If stored on site, protect from the elements.

2.8 PEAT MOSS

A. Peat moss shall be finely shredded, 90% organic moss peat, brown in color and suitable for horticultural purposes. Peat shall be measured in air dry condition, containing not more than 35% moisture by weight. Ash content shall not exceed 10%.

2.9 MULCH FOR TREES, SHRUBS, AND GROUND COVERS

A. Mulch for non bio-retention areas shall be as shown on plans.

B. Mulch for bio-retention areas shall be shredded hardwood.

2.10 STAKING EQUIPMENT

A. Trees and palms shall be staked as shown in landscape plans.

2.11 WATER

A. Contractor shall coordinate with Owner on the extents, if any, of a permanent irrigation system. If no irrigation is provided, contractor shall provide temporary watering as necessary during the warranty and establishment period.

PART 3 - EXECUTION

3.1 FINE GRADING

A. All areas within limits of construction shall be fine graded to the desired grades. All areas within limits of construction are to be fine graded, free of roots, debris and/or other objectionable material, before planting or grassing commence. Any additional fill material needed to fill low or uneven areas shall be provided by the Contractor. Positive drainage away from structures shall be provided in all plant beds so standing water does not occur. Planting beds shall be raised above adjacent lawn areas to provide good drainage conditions.

B. Planting and grassed areas, if not loose, shall be loosened to a minimum depth of 3-inches before fertilizer, seed or sod is applied.

3.2 FERTILIZER AND SOIL AMENDMENTS

A. Contractor shall provide Topsoil Analysis Tests that has been performed by a State Agricultural Experiment Station, Soil and Water Conservation District, State University, or other qualified private testing laboratory, as approved by Landscape Architect.

B. Apply fertilizer and soil amendments after fine grading and mix thoroughly into upper 2 inches of soil.

C. Fertilizer and other necessary soil amendments shall be applied at the rate recommended by Topsoil Analysis Test.

3.3 SODDING

A. See grassing specification.

3.4 SPRIGGING

A. See grassing specification.

3.5 SEEDING

A. See grassing specification.

3.6 SEED PROTECTION

A. See grassing specification.

3.7 LAYOUT OF TREES, SHRUBS, AND GROUND COVERS

A. All plants shall be placed in the proper location as shown on construction plans, allowing Landscape Architect to review all plant locations prior to actual planting. Landscape Architect may make minor adjustments which shall not be cause for changes to the contract price.

3.8 OBSTRUCTIONS BELOW GROUND

A. Prior to excavating planting holes, Contractor shall determine the exact location of electrical, phone, or television cables or conduits, water, drainage or sewer lines, and any other subsurface structures and take precautions to protect them. Any damage to underground utilities shall be repaired immediately at the Contractor's expense.

B. In the event rock, underground construction work, or other obstructions are encountered in any plant hole excavation under this contract, alternate locations may be selected. Where locations cannot be changed, the obstructions shall be removed to a depth of not less than three (3) feet below grade and not less than six (6) inches below bottom of ball or roots when plant is properly set at the required grade. The Contractor shall be responsible for the removal of such rock or other underground obstructions encountered.

3.9 PLANTING HOLES

A. For trees, shrubs and ground covers the planting hole shall be as shown on planting details in the plans. Do not leave planting holes open overnight. In the event that plant holes are dug and not planted in a timely manner, install four (4) foot high orange safety fencing around all excavated areas.

3.10 PLANTING TREES AND SHRUBS

A. Shall be same as grown in the nursery and/or container soil level. Adjust bottom soil mix to insure proper planting level with the proposed surrounding grades. Check plants to insure proper vertical alignment.

B. Fill holes to proper height to receive plant, and thoroughly tamp before setting the plant. Set plant in upright position in the center of the hole, and compact the backfill mixture around the ball or roots. Add soil amendments as required to improve fertility of existing soil and plant growing conditions.

1. When balled or burlapped plants are set, compact topsoil around base of ball to fill all voids. All bindings shall be removed and the top half of burlap removed from around root ball. If burlap is made of natural fibers it can be laid back from the root mass or can be cut away. Remove all burlap if it is made of non-degradable material/fabric. All weeds growing on the root mass shall be removed prior to planting.
2. Containerized plants shall have the container removed prior to planting. Care shall be taken to protect root mass from injury and the root mass intact. If root mass shows evidence of being bound or matted, three vertical 1/2" deep cuts shall be made on alternate sides of the root mass and roots pulled away slightly. This is to untangle roots which have begun to "circle" the root mass and to encourage new root growth. All weeds growing in the root mass shall be removed prior to planting.
3. Roots of bare root plants shall be spread out and topsoil carefully worked in among them. Remove with a clean cut, any broken or frayed roots.

3.11 PLANTING GROUND COVERS

A. Planting beds shall be thoroughly worked to a depth of twelve (12) inches incorporating fertilizer and other soil improvements at the recommended rate suggest by the soils test. Rake prepared planting bed until level, smooth and free from all soil, lumps, rocks, sticks and other deleterious materials. Bed area should be neatly outlined. Space the plants evenly as indicated on the drawings. Plant only in soil that is moist and friable, and not wet or soggy. In the case of planting in the open on hot days, shorten the time between planting and watering.

3.12 WATERING

A. Thoroughly water each plant when the hole is 1/3 full, again at 2/3 full and then complete backfilling. Once backfilling is complete, water again, then tamp the soil in place until the surface of the backfill is level with the surrounding area and the plant bears the same relation of finished grade as it bore to existing grade before being dug.

B. Earth saucers shall be constructed around the perimeter of planting holes of all trees and all single planted shrubs. Earth saucers shall be minimum 3" high and compacted to retain water. Earth saucers shall not be installed in areas where the subsoil is very poorly drained or around mass shrub / groundcover plantings.

C. All trees and shrubs to be hand watered on a regular basis as necessary during the warranty period.

3.13 SOIL MIX

A. Shall be per existing soils on site with recommended amendments from soils test.

3.14 STAKING OF TALL PLANTS

A. Shall be done only if site / environment conditions make if required. If required, trees and palms shall be staked as indicated on the plans.

3.15 MULCHING

A. All plants shall be mulched with an evenly thick layer of clean mulch immediately after planting. Mass plant beds shall be completely mulched to the limits of the bed as shown on the plans. Limit of mulching for individual trees and shrubs shall be slightly beyond the saucer berm. The areas mulched shall be tidy and clean in appearance.

3.16 PRUNING

A. Remove dead, broken or bruised branches after planting using clean, sharp tools.

3.17 WEEDING

A. All planted areas shall be kept free from weeds and undesirable grasses until final acceptance by the Owner. See General notes on plans for additional information.

3.18 INSECT AND DISEASE CONTROL

A. All plant materials shall be disease or insect free upon arrival to the site, however, should any plants show signs of insect or disease infestations, Contractor shall identify nature of infestation and submit to Landscape Architect a proposed method of control. Contractor shall treat all infested plants at its expense. Should the infestation be wide spread and uncontrollable, plants affected shall be removed from site, fresh plants brought in and all other plants treated to prevent infestation of remaining plants at Contractor's expense.

3.19 CLEAN UP

A. Contractor is responsible for removing all trash, debris, rubbish and all other materials associated with the construction from site on a daily basis. All tags, flags, and labels will be removed from plants and trees. The site shall be left broom clean and tidy. Clean up of the site is a prerequisite to final acceptance by the Owner.

PART 4 - MAINTENANCE AND WARRANTY

4.1 MAINTENANCE

A. Protect all plantings (grass, plants and trees) until accepted by Owner. All damage, regardless of cause, shall be immediately repaired and plants replaced if necessary. Erect temporary fences, barricades, signs and other protection as needed to prevent trampling. Contractor is not responsible for replacement of damaged or missing plants and plant materials due to vandalism or other acts beyond the control of the Contractor if proper barriers or other safeguards have been maintained.

B. Maintenance shall include but is not limited to watering, weeding, cultivating, removal of dead material, mulch reapplication, resetting plants to proper grades or upright position, lawn mowing, fertilizing, and other necessary operations.

C. The Contractor shall repair immediately any areas damaged as a result of construction operations or erosion.

E. The Contractor shall maintain all proposed plantings until final acceptance is issued by the Owner.

F. At the end of the maintenance period, all plants shall be in a healthy growing condition. During the maintenance period, should the appearance of any plant indicate weakness and probability of dying, immediately replace without additional cost to the Owner. Replacements required because of vandalism or other causes beyond the control of the Contractor are not part of this contract.

4.2 WARRANTY

A. All shrubs, ground cover, and trees shall be guaranteed by the Contractor to be alive and healthy for a one year period after substantial completion is issued by the Owner. A final inspection with the Owner shall be conducted at the end of the warranty period to determine if any plants will be required to be replaced.

B. Any lawn, plant, or tree which is dead or not showing satisfactory growth shall be replaced at Contractor's expense at the end of warranty period. All replacements shall be of original quality and of a size equal to adjacent plants or trees of the same kind.

END OF SECTION

SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECTURAL CORP 202-C THOMAS & HUTTON ENGINEERING CO.

State of South Carolina REGISTERED LANDSCAPE ARCHITECT No. 901 RYAN P. THOMPSON 10/31/17

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO.	REVISIONS	BY	DATE

THOMAS & HUTTON
50 Park of Commerce Way
Savannah, GA 31405 • 912.234.5300
www.thomasandhutton.com

WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

LANDSCAPE SPECIFICATIONS

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	RPT
DESIGNED:	RPT
REVIEWED:	RPT
APPROVED:	RPT
SCALE:	NTS

GRASSING SPECIFICATION

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Seeding, planting grass, and fertilizing graded areas around buildings, structures, soccer fields and sidewalk shoulders and other disturbed areas.

B. Seed protection.

C. Maintaining grassed areas until final acceptance.

1.2 RELATED WORK

A. Civil and Landscape plans and specifications.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging, and location of packaging. Damaged packages are not acceptable. Store in cool, dry locations away from contaminants.

B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer. Damaged bags are not acceptable. Store in cool, dry locations away from contaminants.

C. Deliver sod on pallets.

D. All material shall be acceptable to Engineer prior to use.

1.4 PLANTING DATES

A. This specification provides for establishment of a permanent grass cover between the dates of March 1 and September 30. If finished earth grades are not completed in time to permit planting and establishment of permanent grass during the favorable season between dates specified above unless otherwise accepted, Contractor will be required to plant a temporary cover to protect new graded areas from erosion and to keep windborne dust to a minimum. The temporary cover shall be planted between October 1 and February 28 unless otherwise permitted.

1.5 MEASUREMENT AND PAYMENT

A. When the season or stage of project is such results of grassing work cannot be determined, conditional acceptance will be made on work completed. When conditional acceptance is made for items of work covered, Contractor shall be entitled to 50% of bid price for the actual work placed and shall receive remaining 50% of bid price when final acceptance is made. Conditional acceptance shall not apply to the remaining items of work, and full bid price payment shall be made when work is acceptably placed and completed in accordance with specifications.

B. Payment for grassing will be made at contract unit price for the item "Grassing" and such payment shall constitute full compensation for furnishing and placing seed and fertilizer or sod where directed and protecting and maintaining seed and sod in all graded and disturbed areas.

PART 2 - PRODUCTS

Contractor shall submit source and species certification documents to Engineer and Owner's Representative for review prior to installation. Supply complete information on all analysis / test methodologies and results; laboratory certifications, manufacturer's specifications, and agency approvals to the Landscape Architect prior to placement of soil mixtures. In addition, provide the Landscape Architect with thoroughly mixed sample of soil mixes for approval prior to placement. Landscape Contractor shall make modifications and improvements to soil mixes deemed necessary by the soil analysis to meet requirements specified here in before, and to ensure proper growing medium for plant material.

2.1 SEED

A. All seed shall conform to all State Laws and to all requirements and regulations of the State Department of Agriculture.

B. The varieties of seed, as specified in Section 2.2, shall be individually packaged or bagged, and tagged to show name of seed, net weight, origin, germination, lot number, and other information required by the State Department of Agriculture.

C. The Engineer reserves the right to test, reject, or accept all seed before seeding.

2.2 SEEDING SCHEDULE (EDIT GRASS TYPES, RATES AND PLANTING DATES TO BE CONSISTENT WITH SPECIFIC PROJECT)

A.

SEED	RATE	PLANTING DATES
Common Bermuda	50 lbs/ acre	March 1 - September 30
Annual Rye (Temp only)	75 lbs/acre	October 1 - February 28

2.3 FERTILIZER

A. Commercial fertilizer of approved type, conforming to state fertilizer laws at the rate as recommended by soils test.

2.4 LIME

A. Agricultural grade, ground limestone at the rate as recommended by soils test.

2.5 SPRIG

A. Healthy living stems, stolons, or rhizomes and attached roots of locally adapted grass without adhering soil, including two to three nodes and from 4 to 6 inches long. Obtain from heavy, dense certified sod. Provide sprigs which have been grown under climatic conditions similar to those in the locality of the project. Coordinate harvesting and planting operations to prevent exposure of sprigs to the sun for more than 30 minutes before covering and moistening. Sprigs showing signs of wilt, mold, containing weeds or other detrimental material or that are heat damaged will be rejected.

B. The varieties of sprig, as specified in section 2.6, shall be individually packaged or bagged, and tagged to show name of sprig, net weight, origin and other information required by the State Department of Agriculture.

C. Sprigs shall be pure to variety specified and shall be free of other grass species, weeds or foreign matter.

D. Sprigs shall be harvested by digging (not collected above soil level) shredding sod, by rototilling sod and raking, by vericutting or by a sprig harvester. Sprigs shall consist of mostly rhizomes and crowns with only a few green leaves.

2.6 SPRIGGING SCHEDULE (EDIT GRASS TYPES, RATES AND PLANTING DATES TO BE CONSISTENT WITH SPECIFIC PROJECT)

A.

SPRIG	RATE	PLANTING DATES
'Tifway 419' Bermuda (or approved equal)	1,000 bushels / ac. (Coverage in 3 months)	April 1 - August 31
Stabilize site with temporary grass seed (See section 2.2)		September 1 - March 31

B. In areas where existing grass is to be matched, Contractor shall sprig at the rate and dates recommended by sprig distributor.

2.7 SOD

A. Sod shall be premium grade, densely rooted, good quality grass of the species and certified variety as shown on the plans, free from noxious weeds with no surface soil being visible. The sod shall be obtained from areas where the soil is reasonably fertile. Sod of specified species with not less than 95 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed. The sod shall be machine cut to a uniform soil thickness that shall contain practically all of the dense root system and not be less than 1-inch thick.

B. Before cutting, sod shall be mowed to a height of not less that 1-1/2" or more than 2". Sod shall be cut in uniform widths min. 12" and in lengths min. 24 inches.

C. Sod shall be delivered to site in a fresh, moist condition with healthy green foliage. It shall be unloaded from delivery trucks on pallets or rolls and placed in final position within 24 hours of delivery. Sod shall be protected from wind and sun and shall not be allowed to dry out before planting.

D. Sod shall be strong enough to support its own weight and retain its size and shape when suspended vertically from a firm grasp on the upper 10 percent of the section.

2.8 ACCESSORIES

A. Straw Mulch: Oat or wheat straw, reasonably free from weeds, foreign matter detrimental to plant life, and in dry condition.

B. Excelsior Mulch: Excelsior mulch shall consist of wood fibers cut from sound, green timber. The average length of fibers shall be 4 to 6 inches. Cut shall be made in such a manner as to provide maximum strength of fiber, but at a slight angle to natural grain of the wood to cause splintering of fibers when weathering in order to provide adherence to each other and to soil.

C. Wood cellulose fiber shall be made from wood chip particles manufactured particularly for discharging uniformly on the ground surface when dispersed by a hydraulic water sprayer. It shall remain in uniform suspension in water under agitation and blend with grass seed and fertilizer to form a homogenous slurry. Mulch fibers shall intertwine physically to form a strong moisture holding mat on the ground surface and allow rainfall to percolate into underlying soil. The mulch shall be heat processed to contain no germination or growth-inhibiting factors. It shall be dyed (non-toxic) an appropriate color to facilitate metering of material.

2.9 PRODUCT REVIEW

A. Contractor shall provide the Engineer with a complete description of all products before ordering. The Engineer will review all products before they are ordered.

PART 3 - EXECUTION

3.1 PREPARATION

A. Areas to be seeded or sprigged shall be made smooth and uniform and shall conform to the finished grade indicated on plans.

B. Remove foreign materials, plants, roots, stones, and debris from surfaces to be seeded.

C. Grassing areas, if not loose, shall be loosened to a minimum depth of 3 inches before fertilizer, seed, sprig or sod is applied.

D. Amendments to soils shall be incorporated into loosened 3 inch top soil layer as recommended by soils test.

3.2 STAND OF GRASS

A. Before acceptance of seeding or sprigging is performed for the establishment of permanent vegetation, Contractor will be required to produce a satisfactory stand of perennial grass whose root system shall be developed sufficiently to survive dry periods and winter weather and be capable of re-establishment in spring.

B. Before acceptance of seeding performed for the establishment of temporary vegetation, Contractor will be required to produce a stand of grass sufficient to control erosion for a given area and length of time before the next phase of construction or establishment of permanent vegetation is to commence.

3.3 SEEDING AND SPRIGGING DATES

A. Seeding and sprigging shall be performed during periods and at rates specified in their respective schedules. Seeding and sprigging work may, at discretion of Contractor, be performed throughout the year using schedule prescribed for given period. Seeding and sprigging work shall not be conducted when the ground is frozen or excessively wet. Contractor will be required to produce a satisfactory stand of grass regardless of the period of year work is performed.

3.4 APPLYING LIME AND FERTILIZER

A. Following advance preparation and placing selected material for shoulders and slopes, lime and fertilizer, if called for based on soil tests, shall be spread uniformly over the designated areas, and shall be thoroughly mixed with the soil to a depth of approximately 2 inches. Fertilizer and lime shall be applied at the rate at the rate recommended by required soils test. Unless otherwise provided, lime will not be applied for temporary seeding. In all cases where practicable, acceptable mechanical spreaders shall be used for spreading fertilizer. On steep slopes subject to slides and inaccessible to power equipment, the slopes shall be adequately scarified. Fertilizer may be applied on steep slopes by hydraulic methods as a mixture of fertilizer and seed. When fertilizer is applied with combination seed and fertilizer drills, no further incorporation will be necessary. The fertilizer and seed shall be applied together when Wood Cellulose Fiber Mulch is used. Any stones larger than 2 ½ inches in any dimension, larger clods, roots, or other debris brought to the surface shall be removed.

3.5 SEEDING

A. Seed shall be sown within 24 hours following application of fertilizer and lime and preparation of the seedbed as specified in Section 3.4. Seed shall be uniformly sown at rate specified by the use of acceptable mechanical seed drills. Rotary hand seeders, power sprayers or other satisfactory equipment may be used on steep slopes or on other areas inaccessible to seed drills.

B. Seeds shall be covered and lightly compacted by means of cultipacker or light roller if the drill does not perform this operation. On slopes inaccessible to compaction equipment, the seed shall be covered by dragging spiked chains, by light harrowing or by other satisfactory methods.

C. Apply water with fine spray immediately after each area has been sown.

D. Do not sow seed when ground is too dry, during windy periods or immediately following a rain.

E. If permitted by the special provisions, wood cellulose fiber mulch or excelsior fiber mulch may be used.

3.6 SEED PROTECTION (STRAW MULCH)

A. All seeded areas seeded with permanent grasses shall be uniformly mulched in a continuous blanket immediately following seeding and compacting operations, using at least 2 tons of straw per acre.

3.7 SEED PROTECTION (EXCELSIOR MULCH)

A. Seed shall be sown as specified in Section 3.5. Within 24 hours after covering of seed, excelsior mulch shall be uniformly applied at the rate of 2 tons per acre. The mulch may be applied hydraulically or by other acceptable methods. Should the mulch be placed in a dry condition, it shall be thoroughly wetted immediately after placing. Engineer may require light rolling of the mulch to form a tight mat.

3.8 SEED PROTECTION (WOOD CELLULOSE FIBER MULCH)

A. After the lime has been applied and ground prepared as specified in Section 3.4, wood cellulose fiber mulch shall be applied at a rate of 1,500 pounds per acre in a mixture of seed and fertilizer. Hydraulic equipment shall be used for application of fertilizer, seed, and slurry of the prepared wood pulp. This equipment shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogeneously mix a slurry of the specified amount of fiber, fertilizer, seed, and water. The slurry distribution lines shall be large enough to prevent stoppage. The discharge line shall be equipped with a set of hydraulic spray nozzles which will provide an even distribution of slurry on various areas to be seeded. The slurry tank shall have a minimum capacity of 1,000 gallons.

Seed, fertilizer, wood pulp mulch, and water shall all be combined into the slurry tank for distribution of all ingredients in one operation by hydraulic seeding method specified herein. Materials shall be combined in a manner recommended by the manufacturer. The slurry mixture shall be regulated so amounts and rates of application shall result in a uniform application of all materials at rates not less than amount specified. Using the color of wood pulp as a guide, equipment operator shall spray prepared seedbed with a uniform visible coat. The slurry shall be applied in a sweeping motion, in an arched stream to fall like rain, allowing wood fibers to build upon each other until an even coat is achieved.

3.9 SPRIGGING

A. Sprigs shall be placed at the date and rates as shown in section 2.6. The sprigging method shall be by broadcast sprigging, hydroplanting or row planter. Sprigging procedure shall ensure even coverage.

B. Sprigs applied by broadcast over the site with a distributor or hydroseeder shall be planted at the rates listed in section 2.6. Cover broadcast sprigs with straw mulch immediately after broadcast and water in immediately (within 2 hours).

C. Sprigs installed by row planter creating a narrow furrow that covers 50 to 80% of the sprig with soil may use less sprig material. Rate shall be as recommended by sprig supplier to provide a solid stand of turf within the time required in Section 2.6. Water in immediately (within 1 hour).

3.10 SODDING

A. Sod shall be placed between March 1st and December 1st. However, if sod is to be placed during periods of temperatures over 90 degrees F., the contractor shall take extra care for quick placement of sod with adequate, consistent watering necessary to ensure sod thrives as planted.

B. Sod shall be placed within 24 hours of cutting.

C. Place top elevation of sod 1/2 inch below adjoining paving or curbs.

D. All areas to be sodded shall be brought to the proper line grade or cross section as was existing prior to construction. Sod shall be placed so that, upon completion, the edges of the sodded areas will be smooth and will conform to the proposed finished grade. Sod shall be laid smooth, edge to edge, with staggered joints. Sod shall be immediately pressed firmly into contact with the sod bed by tamping or rolling, to eliminate any air pockets. A true and even surface shall be provided, to insure knitting without displacement of the sod or deformation of the surfaces of the sodded areas. Do not stretch or overlap sod pieces. Following compaction, screened soil of good quality shall be used to fill all cracks, and excess soil shall be worked into the grass with rakes or other suitable equipment. On slopes steeper than 4 to1, the sod shall be fastened in place with suitable wood or metal pins to hold the sod in place. Any damage by erosion or other causes that may have occurred after completion of grading operations shall be repaired, before commencing with the sodding operations.

E. Immediately before sodding, moisten topsoil with a fine spray to a minimum 1" depth. Sod shall not be laid on soil that is dry and powdery.

F. Sod shall be moist when laid and placed on moist ground. The sod shall be carefully placed by hand, beginning at the toe of slopes and working upwards. The length of the strips shall be at right angles to the flow of surface water. All joints shall be tightly butted and end joints shall be staggered at least 12 inches. The sod shall be immediately pressed firmly into the ground by tamping or rolling. Fill all joints between strips with fine screened soil. Sod on slopes shall be pegged with sod pegs to prevent movement. The sod shall be watered, mowed, weeded, repaired, or otherwise maintained, to insure the establishment of a uniform healthy stand of grass until acceptance.

G. Within 2 hours after sod has been placed, thoroughly water to a minimum depth of 4". After sod and soil have dried, roll sodded areas to ensure good bond between sod and soil and to remove depressions and irregularities. Roll sodded areas with a roller not exceeding 150 lbs. per foot of roller width. Top dress and roll again as necessary to create a smooth even surface.

PART 4 - MAINTENANCE, WARRANTY AND ACCEPTANCE

4.1 MAINTENANCE

A. Maintenance shall consist of providing protection against traffic, watering to ensure uniform seed germination and to keep surface of soil damp, and repairing any areas damaged as a result of construction operations or erosion. Maintenance shall also include, but is not limited to, watering, weeding, cultivating, removal of dead material, lawn mowing, fertilizing, and other necessary operations.

B. The Contractor shall maintain all proposed plantings until the date of final acceptance by the Owner.

4.2 WARRANTY

A. All grassed areas shall be guaranteed by the Contractor to be alive and healthy for a one year period from the date of substantial completion issued by the Owner. A final inspection with the Owner shall be conducted at the end of the warranty period to determine if any areas require replanting. At the end of the warranty period, the sod shall show evidence of rooting to the underlying soil and shall have no competitive weed growth from either the sod or from between the sod joints.

B. Any grassed area which is dead or not showing satisfactory growth shall be replaced at Contractor's expense at the end of warranty period. All replacements shall be of original quality and of a size equal to adjacent plants or trees of the same kind. Replacements required because of vandalism, excessive use or other causes beyond the control of the Contractor are not part of this contract.

4.3 ACCEPTANCE

A. Before acceptance of seeding performed for the establishment of permanent vegetation, Contractor will be required to produce a satisfactory stand of perennial grass whose root system shall be developed sufficiently to survive dry periods and winter weather and be capable of reestablishment in spring.

B. A minimum coverage of 80% density over 100% of the disturbed area is required for seeded areas before project acceptance. Sprig and sod areas shall have 95 % coverage over 100% of the disturbed area prior project acceptance.

END OF SECTION

PERMIT SET - FOR REVIEW PURPOSES ONLY

NO	REVISIONS	BY	DATE

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WASTE MANAGEMENT OF SOUTH CAROLINA, INC.
HARDEEVILLE, SOUTH CAROLINA

HARDEEVILLE HAULING FACILITY

GRASSING SPECIFICATION

JOB NO:	J-26810.0001
DATE:	10/31/17
DRAWN:	RPT
DESIGNED:	RPT
REVIEWED:	RPT
APPROVED:	RPT
SCALE:	NTS

L3.2